

Exhibit 1

UNITED STATES DISTRICT COURT

DISTRICT OF MINNESOTA

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IN RE: CENTURYLINK SALES MDL No. 17-2795
PRACTICES AND SECURITIES (MJD/KMM)
LITIGATION

This Document Relates to:

Civil File No. 18-296

(MJD/KMM)
-----x

VIDEOTAPED DEPOSITION OF MICHAEL L. HARTZMARK

DATE: Tuesday, February 25, 2020

TIME: 9:55 a.m.

LOCATION: Cooley LLP

3175 Hanover Street

Palo Alto, California

Reported By: Lynne Ledanois, CSR 6811

Job No. 3999961

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1 work. 02:22

2 My question to you is: How do you

3 know it can be done in this case?

4 What work have you done to get

5 comfortable that that parsing and scaling is 02:22

6 possible here --

7 MR. BLATCHLEY: Objection, asked and

8 answered.

9 BY MR. GIBBS:

10 Q -- in this case? 02:22

11 MR. BLATCHLEY: Asked and answered.

12 Objection.

13 THE WITNESS: Again, what I've said is

14 that it is -- whatever that input is will be

15 applied classwide. 02:22

16 BY MR. GIBBS:

17 Q You're skipping over the work that's

18 necessary to get to the input.

19 I'm asking you: Have you done any

20 work to get yourself comfortable that whatever 02:22

21 parsing and scaling may need to be done as part

22 of a loss causation analysis to identify an

23 inflation ribbon is possible in this case?

24 MR. BLATCHLEY: Objection. Same

25 reason. 02:22

1 THE WITNESS: You know, I haven't 02:23
2 calculated the inputs. I have not
3 determined the techniques that would be used
4 to calculate the inputs.

5 But I can say whatever the inputs are, 02:23
6 they would be applied classwide, and you
7 would look at the inflation at the time of
8 purchase and the time of sale. It's very
9 straightforward.

10 BY MR. GIBBS: 02:23

11 Q You're not answering my question, with
12 all due respect.

13 So I started by asking you: Are you
14 telling me that anytime they prove loss
15 causation, they, the generic plaintiffs, you can 02:23
16 always calculate an inflation ribbon?

17 And you said, whoa, I can't say
18 something so broad.

19 Where is the limiting principle?
20 Where is the case where they can prove loss 02:23
21 causation, but you can't reliably parse or scale
22 as needed to calculate an inflation ribbon?

23 A I'll say it again.

24 Assuming that loss causation is
25 proven, that CenturyLink is demonstrated to be 02:23

Exhibit 2

UNITED STATES DISTRICT COURT
DISTRICT OF MINNESOTA

IN RE:)
)
CENTURYLINK SALES PRACTICES) MDL 17-2795
AND SECURITIES LITIGATION) (MJD/KMM)
)
)

The ZOOM Audiovisual Deposition of
MICHAEL L. HARTZMARK, PH.D.

June 5, 2020

11:00 a.m. CST

VIA ZOOM

1 PRESENT VIA ZOOM:

(All parties appearing remotely via ZOOM)

2 BERNSTEIN LITOWITZ BERGER & GROSSMANN

3 MR. MICHAEL BLATCHLEY

MR. MICHAEL MATHAI

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Appeared on behalf of Plaintiffs.

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19 ALSO PRESENT:

20 Mr. Peter Hess, Analysis Group

21 VIDEOGRAPHER: JOEL FREEDMAN

22 REPORTED BY: JO ANN LOSOYA

23 LICENSE #: 084-002437

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EXAMINATION

Witness	Page	Line
MICHAEL L. HARTZMARK, PH.D.		
By Mr. Gibbs	4	23
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1 THE VIDEOGRAPHER: Good morning. We are
2 going on the record at 11:11 a.m. on June 5th, 2020.
3 This is Media Unit No. 1 of the video-recorded
4 deposition of Michael Hartzmark taken by the counsel
5 for the defense in the matter of CenturyLink Sales
6 Practices and Securities Litigation filed in the
7 United States District Court, District of Minnesota,
8 Case No. 17-2795-MJD-KMM.

9 This deposition is being held
10 remotely via Zoom. My name is Joel Freedman. The
11 court reporter is JoAnn Losoya. We are from
12 Veritext Legal Solutions.

13 At this time, I'm going to ask all
14 counsels to put your appearances into the chat room
15 with your name and your firm, and the court reporter
16 will now swear in the witness.

17 (Witness duly sworn.)

18 WHEREUPON:

19 MICHAEL HARTZMARK, PhD
20 called as a witness herein, having been first duly
21 sworn, was examined and testified as follows:

22 E X A M I N A T I O N

23 BY MR. GIBBS:

24 Q. Thank you. Just a couple of points for
25 the record before we get started.

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1 By my watch, when the videographer
2 began the read in, it was actually 9:11 Pacific
3 time. So 11:11 Central time.

4 We are, as the videographer noted,
5 taking this deposition remotely via Zoom by
6 agreement of all parties. I'll let anyone weigh in
7 if they disagree with that.

8 To begin, Mr. Hartzmark, you
9 understand that you are testifying here today under
10 oath just as if you were testifying in a court of
11 law?

12 A. Yes.

13 Q. And is there any reason why you would be
14 unable today to understand and answer my questions?

15 A. No.

16 Q. Okay. Before the deposition began, we
17 had asked for you to have a number of documents
18 printed out and available to you in the room. So I
19 just want to check and make sure that's been done.

20 As I understand it, we asked for you
21 to have printed out and available to you a copy of
22 the Consolidated Securities Class Action Complaint
23 previously marked as Exhibit 1.

24 Do you have that document with you?

25 A. Yes, I do.

1 (Deposition Exhibit 1 previously
2 marked for identification.)

3 BY MR. GIBBS:

4 Q. Excellent. Thank you.

5 We had also asked for you to have
6 printed out and available to you the Expert Report
7 of Michael L. Hartzmark, PhD, dated January 21,
8 2020, previously marked as Exhibit 2.

9 Do you have that document with you?

10 A. Yes, I do.

11 (Deposition Exhibit 2 previously
12 marked for identification.)

13 BY MR. GIBBS:

14 Q. Excellent.

15 We had asked to have printed out and
16 available to you the Expert Report of Bruce Deal
17 dated March 23, 2020, and previously marked as
18 Exhibit 30.

19 Do you have that document with you?

20 A. Yes, I do.

21 (Deposition Exhibit 30
22 previously marked for
23 identification.)

24 BY MR. GIBBS:

25 Q. Thank you.

1 And then, finally, we had asked the
2 court reporter to premark and had asked for you to
3 have available to you in the room a copy of the
4 Reply Expert Report of Michael L. Hartzmark, PhD,
5 dated May 4, 2020, and premarked as Exhibit 32.

6 Do you have that document in the room
7 with you?

8 A. I have a copy of it. There's no exhibit
9 number but...

10 Q. Let me just represent to you that that
11 document has now been marked as Exhibit 32, and just
12 to confirm, is the document I have just told you
13 that has been premarked as Exhibit 32, does it
14 appear to be a true and correct copy of your Reply
15 Expert Report in this matter?

16 A. It does. It's a signed copy. It also
17 has the case information other than page 1. It
18 starts on page 2 of 78, and the pages are
19 contiguously numbered. So it does appear to be the
20 report. There's Appendix A to the report and
21 Appendix B to the report. So should I mark this or
22 does it matter?

23 Q. Well, it's totally up to you. I will
24 probably refer to it as your reply report. I may
25 refer to it as Exhibit 32. Those are the same thing

1 now. So if it helps you to have "Exhibit 32"
2 written on it, that's fine for you to go ahead and
3 do that.

4 A. Yes. Just to make sure, I have written
5 in the corner here "Exhibit 32" just in case I
6 forgot the numbers, especially between Mr. Deal and
7 my report. So thank you.

8 Q. Well, I sometimes do, too, but luckily we
9 only have four documents to work with today. So
10 hopefully we will be able to keep it all straight.

11 (Deposition Exhibit 32 was
12 marked for identification.)

13 BY MR. GIBBS:

14 Q. Speaking of your reply report, may I ask
15 you please to turn to page 63 of the report.

16 A. This is my page 63?

17 Q. Yes.

18 A. Okay. I'm there.

19 Q. Is that your signature there on page 63?

20 A. Yes.

21 Q. Okay. Thank you.

22 Now, I want to turn back to the
23 beginning of your reply report. And in particular,
24 I would like to direct your attention to page 2,
25 meaning your page 2, not the court's page 2.

1 A. My page 2, which is the start --
2 it starts with the Section B, Reply Opinions.

3 Q. That's correct.

4 And since we have touched on this
5 subject a couple of times, let me just say for the
6 record. When I say "your page 2" or "the internal
7 page 2," those are the page numbers at the bottom of
8 the pages. As you have noted because this is a copy
9 of your reply report that's been filed with the
10 court, there's a separate set of page numbers
11 running along the top of this copy that reflect the
12 pages of a document filed in court.

13 For purposes of today's discussion,
14 I'm only going to refer to the page numbers at the
15 bottom of the pages, which are the page numbers you
16 used in your original report. Is that okay?

17 A. Yes. That's fine. And is that the case
18 with all four documents?

19 Q. Yes. I'll use the internal original page
20 numbers, not the court's page numbers.

21 A. Very good.

22 Q. Okay. So turning back to page 2 of your
23 reply report, as you indicated, there is a heading.
24 It's letter B and labeled Reply Opinions, and
25 underneath that is a paragraph that is numbered 3.

1 Is that a summary of the opinions offered by you in
2 this reply report?

3 A. Yes. Below that are three reply opinions
4 based on the information in Mr. Deal's report,
5 Exhibit 30, and my original opening report.

6 Q. Okay. So I want to spend a few minutes
7 with you making sure I understand the scope of the
8 opinions that you're offering with this reply
9 report, and first, I want to ask you about a
10 representation that lead plaintiff's counsel made to
11 the court in opposition to our motion for leave to
12 file a sur-reply and for leave to take additional
13 deposition time with you. You don't need to see the
14 document. I'm just going to read it to you.

15 So at page 8 of the plaintiff's
16 opposition to our motion for leave, lead plaintiff's
17 counsel argued, quote, "because defendants failed to
18 offer any opinion that there was a lack of price
19 impact, plaintiffs had no need to present contrary
20 affirmative price impact evidence. Accordingly,
21 Dr. Hartzmark's reply report contained no new
22 statistical analyses and no new opinions other than
23 the entirely proper and completely expected
24 critiques of Mr. Deal's analysis" close quote.

25 Is that second sentence beginning

1 with "accordingly" a true and correct description of
2 the scope of the opinions you've offered in your
3 reply report?

4 A. Can you read the second sentence back to
5 me again?

6 Q. Certainly.

7 Quote, "Accordingly, Dr. Hartzmark's
8 reply report contains no new statistical analyses
9 and no new opinions other than the entirely proper
10 and completely expected critiques of Mr. Deal's
11 analyses" close quote.

12 A. And the question?

13 Q. The question is whether that's a true and
14 correct description of the opinions offered in your
15 reply report?

16 A. Yes.

17 Q. Okay. Now, I want to focus in more
18 closely on your reply opinion 3, which begins at the
19 bottom of page 2 and carries over for a couple of
20 lines onto page 3.

21 Do you have that in front of you?

22 A. I do. I just want to also suggest that
23 you read a document that I -- again, I don't have,
24 and sort of a legal explanation, but from an
25 economic perspective, what was in that second

1 sentence it's correct.

2 Q. Okay. Thank you.

3 A. So now I'm on Reply Opinion 3, starting
4 with "Mr. Deal's report," is that correct?

5 Q. Yes. Yes.

6 As a general matter, am I correct in
7 understanding that this description of Reply Opinion
8 3 is describing the opinions set forth in your reply
9 report that relate to the question of price impact?

10 A. They are related to the response to
11 Mr. Deal's report on whether or not there's evidence
12 of an absence of price impact.

13 Q. You've anticipated my next question,
14 which is as I read this description of your Reply
15 Opinion 3, it is limited to your opinion about what
16 Mr. Deal's report and analyses do and do not prove
17 with respect to price impact; is that fair?

18 A. Mr. Deal, as I read his report and
19 deposition, was not asked to evaluate whether or not
20 was there an absence of price impact. In his
21 analysis of my report and his discussions of the
22 challenges of parsing, he neither presented evidence
23 that there was -- he did not present evidence that
24 there was an absence of price impact and, in fact,
25 based on a series of pieces of evidence in his

1 report, there's actually support for what I
2 understand to be price impact and that's what my
3 basic -- that's what my report suggests.

4 Q. And let me just try to be more clear
5 because I'm not asking you to regurgitate for me the
6 substance of your opinion. All I'm trying to do is
7 make sure I'm correctly understanding the scope of
8 the opinion you're offering. Maybe this will help.

9 I'm trying to distinguish between an
10 opinion that focuses on what Mr. Deal's report and
11 analysis do and do not prove on the one hand, versus
12 a broader opinion about what the evidence does and
13 does not show that is not limited to Mr. Deal's
14 report.

15 Does that distinction make sense to
16 you?

17 A. I believe so. Mr. Deal's report fails to
18 present any evidence of an absence of price impact
19 and, in fact --

20 Q. Sir, I need to interrupt you because my
21 question was very, very -- no, no, no. Michael, he
22 is deliberately ignoring the question I have asked.
23 I asked it twice.

24 I am not asking you to repeat your
25 opinion to me, Dr. Hartzmark. I'm asking you to

1 tell me if I am right or wrong in understanding the
2 scope of your opinion, and I'm telling you I
3 understand the scope of your opinion to be limited
4 to a critique of Mr. Deal's opinions; is that
5 correct?

6 MR. BLATCHLEY: Objection to that
7 colloquy. He's been answering your questions just
8 as you have asked them. I'd ask that you permit the
9 witness to answer the question.

10 MR. GIBBS: Answer the question now,
11 Dr. Hartzmark.

12 MR. BLATCHLEY: And that you not
13 interrupt the witness.

14 MR. GIBBS: Let's not interrupt me
15 either, Michael.

16 BY MR. GIBBS:

17 Q. Dr. Hartzmark, is it correct that the
18 opinions summarized in the paragraph beginning on
19 page 2 of your reply report labeled Reply Opinion 3
20 is limited to a critique of Mr. Deal's opinions and
21 analysis regarding price impact, yes or no?

22 MR. BLATCHLEY: Objection.

23 BY THE WITNESS:

24 A. I can't say that it is limited in the
25 sense that it's based on both a response to

1 Mr. Deal's report and all of the information that
2 was included in what is Exhibit 2 to this
3 deposition, the Expert Report of Michael L.
4 Hartzmark.

5 Q. I don't understand that answer.

6 A. You asked whether Reply Opinion 3 was
7 based just on a response to Mr. Deal, correct?

8 Q. Yes.

9 A. And what I'm saying is yes, it is, with
10 the addition of the fact that I incorporate
11 information from the opening report as well in terms
12 of what the opinions are in opinion -- Reply Opinion
13 3.

14 Q. That's fine. In other -- go ahead.

15 A. No, I'm done.

16 Q. And just let me make sure I'm
17 understanding you correctly because I think you said
18 "yes" and then added a qualification so I want to
19 make sure I understand.

20 If I understand you correctly, you're
21 telling me that the opinion that is summarized in
22 the paragraph labeled Reply Opinion 3 that begins on
23 page 2 of your reply report is a critique of
24 Mr. Deal's analysis and opinions that, in part,
25 refers to or incorporates information that's

1 reflected in your opening report in this case; is
2 that correct?

3 A. Yes.

4 Q. Okay. Let me ask a slightly different
5 question. In your reply report, are you offering
6 any affirmative opinion to the effect that any of
7 the particular challenged statements in this case
8 had an impact on the price of CenturyLink's common
9 stock or bonds during the class period?

10 MR. BLATCHLEY: Objection, form.

11 BY THE WITNESS:

12 A. I was not asked to measure or offer a
13 complete analysis of the amount of price impact.
14 What I was asked to do was to reply to Mr. Deal,
15 incorporate the information in his report in my
16 opening report, and based on that, my opinion is
17 there's a lack of -- there's no evidence of a lack
18 of price impact. However, there is evidence in his
19 report, although I didn't measure it and I didn't go
20 through a full economic analysis of that, but there
21 is evidence of price impact associated with the
22 alleged corrective disclosures.

23 Q. So I'm not asking you whether your
24 opinion was complete, nor am I asking whether you
25 measured the amount of any price impact. My

1 question is simply whether in your reply report you
2 are offering an affirmative opinion that any of the
3 challenged statements actually had an impact on the
4 price of CenturyLink's common stock or bonds during
5 the class period?

6 MR. BLATCHLEY: Objection, asked and
7 answered.

8 BY THE WITNESS:

9 A. Yes. As I stated, based on Mr. Deal's
10 report, my opening report, there is evidence and
11 support that is consistent with there being price
12 impact as defined, again, by the absence of -- I'm
13 sorry -- by defined as being 100 percent of the
14 price movement being caused by factors other than
15 those alleged in the Complaint.

16 MR. GIBBS: I'm going to ask the court
17 reporter to reread my question. You didn't answer.

18 MR. BLATCHLEY: Objection, misstatement.

19 (Record read as requested.)

20 MR. BLATCHLEY: Is there a question?

21 MR. GIBBS: Yeah. I've asked the court
22 reporter to reread the question so he can answer the
23 question I asked. That's the question pending.

24 MR. BLATCHLEY: Objection, asked and
25 answered. Hold on, Dr. Hartzmark.

1 Objection, asked and answered.

2 MR. GIBBS: No, he didn't answer it.

3 Answer the question, please.

4 BY THE WITNESS:

5 A. I'm offering evidence that's consistent
6 with there being price impact. But my opinion is
7 that Mr. Deal has not demonstrated and not presented
8 evidence that there is a lack of price impact, and
9 that is the opinion in Reply Opinion 3.

10 I say, "as demonstrated below, the
11 analyses Mr. Deal does provide are insufficient to
12 show that defendant's misstatements did not impact
13 the prices of CenturyLink's securities. To the
14 contrary, Mr. Deal's analyses support the opinion
15 that there is no evidence of a lack of price
16 impact."

17 Now, that's a double negative. No
18 evidence of a lack of price impact means that there
19 is actually to the contrary evidence that is
20 consistent with there being price impact.

21 Q. What does it mean to say that you're
22 offering evidence of price impact?

23 A. Well, let me just give a simple example.
24 If both Mr. Deal and I agree that a specific
25 misrepresentation or corrected disclosure needs to

1 be parsed, that in itself is evidence of price
2 impact because it suggests that less than
3 100 percent of the price movements are associated
4 with -- with -- with other factors and, therefore,
5 more than zero percent of the price movements are
6 associated with the allegations. So that is
7 evidence consistent with there being price impact.

8 Q. Are you offering an expert opinion that
9 that is evidence of price impact?

10 A. I defined -- wait. Say that again. I
11 think you said it without a word. Say it again.

12 Q. No, I didn't.

13 I'll ask the court reporter to repeat
14 the question I asked.

15 A. Okay.

16 (Record read as requested.)

17 BY THE WITNESS:

18 A. Am I offering an opinion that there is
19 evidence of price impact?

20 Q. No. I'll reask the question.

21 A. I mean, that's what I hear.

22 Q. May I finish, please?

23 You described your view that if you
24 and Mr. Deal agree that parsing is required, you
25 interpret that to mean that at least some part of a

1 price movement is caused by a corrective disclosure.

2 Now, to be clear, I disagree with
3 that interpretation, but my question is: Are you
4 offering as an expert opinion this view that the
5 agreement on the need for parsing is evidence of
6 price impact? Is that your expert opinion?

7 A. I'm going to first state for the record
8 that Mr. Gibbs's suggestion that I was interrupting
9 him is likely due to the fact that we have a delay
10 between the picture and the sound and if he's going
11 to spend all day trying to harass me, I really don't
12 appreciate it.

13 As to the issue of parsing, by
14 itself, it suggests that the definition that I
15 provided, the clear definition that I provided that
16 an absence of price impact means that 100 percent or
17 the entirety of a price movement is explained by
18 other factors, okay, if you -- if you say that you
19 need to pars or disaggregate, you are implicitly
20 saying that you have to separate the other factors
21 from the impact of the allegations.

22 Q. Mr. Hartzmark, that is not my question.
23 My question is whether what you just said is
24 something you are offering as an expert opinion as
25 an economist or is it something other than an expert

1 opinion?

2 A. It's based on --

3 Q. I'm not asking what it is based on. I'm
4 entitled to know what is the scope of the opinions
5 you are offering in your report. I believe the
6 scope is ambiguous. I'm entitled to a clear
7 explanation of what parts of your report you believe
8 and are offering as expert opinion and which parts
9 are not. It's a simple question and we have now
10 spent the better part of 20 minutes going back and
11 forth because you won't answer my question and
12 instead just keep repeating your position.

13 MR. BLATCHLEY: Objection to the colloquy
14 and the testimony by Mr. Gibbs. I think it is
15 inappropriate. He's trying to answer your questions
16 and I would just ask that you let him do that.

17 BY THE WITNESS:

18 A. Based on my understanding that price
19 impact as it relates to your world, the legal world,
20 means that there is some impact on price and that
21 100 percent of that price movement has to be caused
22 by some other factor other than the allegations.
23 Okay. That -- I'm not opining that that is the
24 case. I'm -- I understand that to be the case and
25 that is the basis and the foundation of my opinion.

1 I'm not opining what the Supreme Court meant. I'm
2 accepting price impact as I understand it to be in
3 the Supreme Court in Halliburton II.

4 Q. You don't consider yourself a legal
5 expert, correct?

6 A. No.

7 Q. And you don't offer yourself as an expert
8 in the legal significance of a given fact or piece
9 of evidence, correct?

10 A. Correct.

11 Q. And I'm going to try this one more time
12 and then I'll consider whether to move on.

13 Can you point me to any particular
14 challenged statement that you believe had a specific
15 impact on the price of CenturyLink's common stock or
16 bonds during the class period?

17 MR. BLATCHLEY: Objection, asked and
18 answered, but go ahead and answer, please.

19 BY THE WITNESS:

20 A. The statements on June 12 -- I'm sorry --
21 June 16, 2017, June 19, 2017, and July 12, 2017,
22 based on the economic framework and actually the
23 economic framework that is consistent with
24 Mr. Deal's, where I examined the statistical
25 significance of the price movement, the analysts and

1 the number of analysts that wrote reports about
2 them, those corrective -- alleged corrective
3 disclosures, about the commentary in those alleged
4 corrective disclosures, about the impact on their
5 targets or the recommendations of those, of the
6 response of the company to those alleged corrective
7 disclosures, the response of the board from those
8 corrective disclosures, and the joint statistical
9 significance of the bonds and the stock all suggest
10 that there is price impact from that.

11 In addition -- in addition,
12 Mr. Deal's report and -- suggests that there is
13 price impact from those alleged corrective
14 disclosures.

15 Q. So two things. First of all, I need to
16 clarify my question because I was intending to ask
17 you whether you could point to one of the challenged
18 statements and say whether you believe one of the
19 challenged statements had an impact on the price of
20 CenturyLink's common stock or bonds. I believe you
21 just identified statements that plaintiffs have
22 characterized as corrective disclosures, but before
23 I get back to my question, I asked you a simple yes
24 or no question --

25 A. Can you --

1 Q. -- and you gave me several paragraphs --
2 can you let me finish what I'm saying?

3 I asked you a simple yes or no
4 question whether you could point me to a statement
5 that had an impact on the price of CenturyLink's
6 common stock or bonds, and you gave me several
7 paragraphs regurgitating your opinions.

8 If you keep doing that, I will go to
9 the court and I will get more deposition time
10 because you are not answering the very specific and
11 very direct questions I'm asking you. So I'm going
12 to try again and I'm going to clarify it because my
13 question was unclear.

14 So just to be clear, I'm asking about
15 the challenged statements, the ones that plaintiffs
16 in this case have claimed were false and misleading.

17 First question: Is that
18 clarification clear to you, yes or no?

19 MR. BLATCHLEY: Just one second.

20 MR. GIBBS: I want to know whether the
21 clarification is clear. Does he understand the
22 clarification or not?

23 MR. BLATCHLEY: In one moment but I am
24 objecting strenuously to this wildly inappropriate
25 characterization of the testimony. He's been

1 answering your questions as they have been asked.

2 MR. GIBBS: Michael, if you have an
3 evidentiary objection, assert it, and then stop
4 interrupting my examination.

5 BY MR. GIBBS:

6 Q. Dr. Hartzmark, do you understand the
7 clarification I just explained, yes or no?

8 I don't want a colloquy. I don't
9 want four paragraphs summarizing your report.

10 I want know if you understand the
11 distinction I just drew between the challenged
12 statements, the ones plaintiffs claimed were false
13 and misleading on the one hand, and the corrective
14 disclosures on the other hand?

15 A. Well, given that you -- there's not
16 one -- one that I'm aware of in Mr. Deal's report
17 Complaint defining quote/unquote "challenged
18 statements," and that I answered the question before
19 exactly and, in fact, elucidated the reasons, and it
20 was not repetitive because if you can show me
21 anywhere in the record where I had repeated myself,
22 I find that offensive.

23 As to now after -- after you
24 corrected yourself and went back to what I
25 believe -- I mean, maybe you can show me in the

1 Complaint the term "challenged statement." After
2 you redefined "challenged statement" as to be the
3 misrepresentations or omissions, which I believe is
4 the term in the Complaint, I now understand what you
5 mean by "challenged statements."

6 Q. So with that clarification, can you point
7 me to any of the challenged statements that you
8 believe had a specific impact on the price of
9 CenturyLink's common stock or bonds during the class
10 period? And that's a yes or no question.

11 MR. BLATCHLEY: Objection, asked and
12 answered.

13 BY THE WITNESS:

14 A. Well, again, the challenged statements I
15 believe, because, again, this is a term you are
16 using, is associated with what Mr. Deal and I and I
17 believe everybody prior to this particular
18 deposition called the front-end misrepresentations
19 and omissions. Is that correct?

20 Q. I would call them the alleged
21 misrepresentations and omissions, but if that's a
22 more useful term for you, I'm happy to use that
23 rather than challenged statements.

24 A. As it relates to the front-end
25 misrepresentations, all I did was respond to the

1 fact that Mr. Deal's preliminary and illustrative
2 analysis was insufficient to demonstrate or present
3 evidence of a lack of price impact based on the
4 front-end misrepresentations at all, and that's all
5 I did. I did not examine the individual dates, nor
6 did he for that matter.

7 Q. So is the answer to my question "no"?

8 A. Well, other than the fact that there were
9 four dates with statistically significant returns,
10 the other 52 dates that are quote/unquote by you
11 "challenged statements" were never evaluated
12 sufficiently to determine whether there was or was
13 not price impact.

14 Q. Is the answer to my question yes or no,
15 Dr. Hartzmark?

16 MR. BLATCHLEY: Objection.

17 BY THE WITNESS:

18 A. All I did was respond to Mr. Deal and I
19 did not -- there's nothing that I showed other than
20 the fact that his statistically significant returns,
21 which he and I both agreed upon, were statistically
22 significant and that was the analysis, but there are
23 another 48 dates that I did not examine so I did not
24 do -- I did not present any additional evidence
25 related to price impact on the front-end alleged

1 misrepresentations and alleged omissions.

2 Q. As to the four dates that you have
3 alluded to, the ones where you and Mr. Deal both
4 observed statistically significant abnormal returns
5 on dates when some of the alleged front-end
6 misrepresentations or omissions occurred, are you
7 offering an opinion to the effect that any of the
8 alleged misstatements or omissions were the cause of
9 those statistically significant abnormal returns?

10 A. No. My opinion as it relates to those
11 statistically significant returns is that Mr. Deal
12 did not present evidence that there -- I'm sorry --
13 evidence of a lack of price impact and that, in
14 fact, his discussion about how it might have been
15 caused by the alleged misrepresentations and
16 omissions and that parsing might be required and
17 that the issue was that it is difficult to parse is
18 implicit in his -- his -- his words that there's
19 price impact on those, but I did not do any
20 evaluation of those like I did with the corrective
21 disclosures -- alleged corrective disclosures.

22 Q. Well, since we're on the four dates, let
23 me just try to wrap up with those.

24 So, again, I'm talking about the four
25 dates where both you and Mr. Deal observed

1 statistically significant abnormal returns on dates
2 when some of the front-end allegedly false or
3 misleading statements were made, and just for the
4 record, as I understand it, the four dates that
5 we're talking about here are May 8, 2014;
6 November 5, 2015; December 7, 2015; and February 11
7 of 2016.

8 Are we talking about the same
9 dates --

10 A. Yes.

11 Q. -- you and I?

12 Okay. If I understand your testimony
13 so far, you have not for any of those four dates
14 that I had just listed performed any economic
15 analysis to assess whether and to what extent the
16 abnormal returns on those dates resulted from any
17 particular statement or disclosure; is that fair?

18 A. Yeah. Neither Mr. Deal nor I
19 demonstrated that other factors caused 100 percent
20 of the price increase on those dates and, therefore,
21 there was no evidence presented of a lack of price
22 impact.

23 Q. Do you know whether CenturyLink made any
24 disclosures on any of those four dates other than
25 what we've been referring to as the front-end

1 alleged false statements or omissions?

2 A. From Mr. Deal's report, it suggested that
3 they made what he calls information-rich
4 disclosures, which had a myriad of information, a
5 myriad especially of financial metrics because they
6 were November 5th was CenturyLink's Q3 results and
7 February 11th was CenturyLink's Q4 and annual
8 results. So that's my answer.

9 MR. GIBBS: I'm going to ask the court
10 reporter to reread my question, please.

11 (Record read as requested.)

12 BY THE WITNESS:

13 A. And as I said in my answer, relying on
14 Mr. Deal's analysis where he says there are, I don't
15 know, 40, 50, 60 metrics that are put forward, that
16 would suggest that there is potentially information
17 that might have impacted the stock that was not
18 associated with the allegations, but he never
19 demonstrated that that other information caused
20 100 percent of the price movement on that day, nor
21 did he demonstrate that the information on the
22 alleged disclosure made zero impact on the price on
23 those days.

24 Q. Mr. Hartzmark, I'm not asking you about
25 what Mr. Deal did or didn't do. I'm asking you what

1 you did, and I'm entitled to an answer about what
2 you did. So let me try again, but I want to preface
3 it by making clear I'm not asking you what Mr. Deal
4 did or did not do. I'm asking what you did. So
5 with that preface, let me ask again.

6 As to the four dates we've been
7 discussing where both you and Mr. Deal observed
8 statistically significant abnormal returns on dates
9 when some of the front-end allegedly false or
10 misleading statements were made, it is my
11 understanding you have not performed any analysis to
12 evaluate whether there were also some potentially
13 confounding disclosures made on those dates, am I
14 correct in that understanding?

15 MR. BLATCHLEY: Objection, asked and
16 answered.

17 BY THE WITNESS:

18 A. Since you didn't understand my clear and
19 concise answer, let me tell you exactly what I did
20 as it relates to those four dates.

21 In Mr. Deal's report starting on
22 page 43, in Paragraph 72, he discusses or he
23 provides what he believes is a purported economic
24 framework to evaluate whether there is price impact
25 on those days. So I began on May 8, 2014, by

1 reading Paragraph 73. Paragraph 73 -- you asked me
2 what I'm relying on for my economic and so I'm --

3 Q. I didn't ask you that at all. That isn't
4 actually what I asked you at all. I was trying to
5 find out what work you did and didn't do.

6 MR. BLATCHLEY: Mr. Gibbs, he's answering
7 the question. Just let him do that, please.

8 THE WITNESS: You just asked --

9 MR. GIBBS: He mischaracterizes the
10 question repeatedly.

11 BY THE WITNESS:

12 A. The character -- you just said what work
13 did I do. My work involved opening up Mr. Deal's
14 report, reading it carefully, and on Paragraph 73 --
15 let's take this date for example -- he states: "The
16 first statistically significant price increase was
17 on May 8, 2014, the date that we agreed and I
18 answered, following the release of CenturyLink's Q1
19 2014 10-Q. CenturyLink reported large additions to
20 both Prism TV and broadband high-speed internet
21 subscribers. Plaintiffs provide no evidence that
22 these increases were driven partially or wholly, if
23 at all, by CenturyLink's misleading sales practice."

24 So even he concedes that it could be
25 partial.

1 "In addition, there were other
2 positive factors reported that could also have
3 driven the price increase. For instance,
4 CenturyLink's stock buyback had progressed at a
5 rapid rate. Analysts at Macquarie stated, we
6 believe that CTL, as the most liquid wireline stock,
7 will benefit from a scarcity premium on the emerging
8 high-bandwidth theme."

9 And that's Paragraph 73. That was
10 the work. You asked for the economic framework that
11 I used. You asked for the work that I did. That is
12 what I looked at. And from that and only that and
13 the fact from my opening report that there was a
14 statistically significant price impact, I conclude
15 that this is not evidence of a lack of price impact.

16 Q. But you have not reached an independent
17 opinion as to whether or not there was confounding
18 news on May 8, 2014; is that correct?

19 A. I have not done a loss causation analysis
20 on May 8, 2014. I did not do a preliminary,
21 illustrative, or incomplete analysis. I read and
22 responded solely to the analyses, and that is the
23 analyses from Mr. Deal related to May 8, 2014, that
24 is the completion, the whole of what he considers to
25 be an economic framework for evaluating that date.

1 And that is what I utilized for my analysis. I did
2 not do an independent analysis to determine whether
3 the losses -- or I'm sorry -- the gains on that day
4 were caused by the alleged misrepresentations or
5 other factors. But nor did he.

6 Q. Let me turn now to a different subject.
7 And in particular, I want to focus on Paragraph 113
8 of your reply report, please. Let me know when you
9 have that in front of you, please.

10 A. I have it in front of me.

11 Q. Okay. If I'm understanding this
12 paragraph correctly, you are -- starting with the 52
13 alleged misstatement dates that Mr. Deal discussed
14 in his report and you are expressing the view that
15 out of the 52 dates that Mr. Deal discussed, there
16 were only 25 that might reasonably be expected to
17 result in a positive price movement. Am I
18 understanding that correctly?

19 A. That is my conclusion based on my
20 analysis.

21 Q. Okay. I was not able to find anywhere in
22 your reply report a list of those 25 dates. Did I
23 miss something or is it -- or are those dates
24 actually listed anywhere in your reply report?

25 A. Those dates are based on Mr. Deal's I

1 believe it's called figure -- I've got the report
2 here. Mr. Deal presented a report -- I'm sorry.

3 Q. I'm asking about your 25, not his 52,
4 just to be clear.

5 A. Right. But you can get the 25 from going
6 through the analyses, and there's certainly a backup
7 that I would have gone through. Maybe the Analysis
8 Group person can tell me which table. He's got --
9 there are so many tables.

10 MR. BLATCHLEY: Dr. Hartzmark --

11 BY THE WITNESS:

12 A. Figure 5 -- Figure 5 lists the dates, and
13 you can see, okay, that there are the announcement
14 types, and as you ask what type of work I did, well,
15 I looked at these Figure 5, I looked at this and I
16 said why would you expect, for example -- I can
17 barely read this -- that if there's an earnings
18 announcement on May 8, 2013, that there would be a
19 price response from a 10-K -- I'm sorry -- May 8,
20 2013, would you expect there to be a price response
21 from the 10-Q, especially in your report where you
22 talk about all those factors there and especially
23 since most academic research, in fact, all academic
24 research related to earnings go from the first
25 earnings announcement and not from the second

1 earnings announcement and, in fact, I think Mr. Deal
2 understands that.

3 So needless to say, if you go through
4 here and look at all the repetition, if you go
5 through here and look at the proxies because having
6 been the CEO, Chairman of the Board, and president
7 of a public company and the CFO of a public company,
8 the proxies generally -- generally, not always, but
9 generally would not be expected this have been a
10 positive return because all I'm doing is boilerplate
11 stuff. So that's the proxies.

12 So I'm looking at this and going,
13 okay, an investor conference, possibly, and then,
14 statement to a new source, and you wonder, okay,
15 what type of statement to the new source is that.

16 But Mr. Deal never took a look at
17 these, and if you go through these, you can find 27
18 of the 52 where it wouldn't be expected, that
19 doesn't mean that there couldn't be some material
20 information, but where you wouldn't expect it and,
21 in fact, in my event study which Doctor -- or Mr.
22 Deal criticized where he said I ad hocked or
23 selectively chose the earnings date and then in his
24 own report contradicted that whole issue of choosing
25 the earnings date, it's clearly the case that you

1 would want to look at earnings dates because that
2 is -- that would be the relevance.

3 So if I were doing an analysis like
4 this, unless I had some objective measure, I would
5 eliminate 27 of the 25 dates.

6 MR. GIBBS: Madam Court Reporter, would
7 you please reread my question?

8 (Record read as requested.)

9 BY MR. GIBBS:

10 Q. Can you answer that question,
11 Dr. Hartzmark?

12 Yes, that's the question I asked. I
13 would like to know, Dr. Hartzmark, whether you have
14 an answer to that question.

15 A. Well, it's clear in the -- certainly in
16 Paragraph 110 where this comes from, but while I
17 have identified more than 50 percent of the dates in
18 Mr. Deal's analysis on which a trained financial
19 economist would not necessarily expect to observe
20 statistically significant returns, the largest
21 category is associated with duplicate disclosures,
22 which might have been material, but would not
23 have -- I'm sorry -- but would not necessarily have
24 been unanticipated so would not have expected to
25 have impacted the price. The Complaint alleges that

1 numerous false and misleading statements were
2 repeated throughout the class period.

3 I don't know if you want me to read
4 this, but this tells you what it was and what I did
5 to take the 52 down to 25.

6 Q. So I can assure you I don't want you to
7 read it to me. I'd like you to answer my question.
8 Are the specific 25 dates referenced in your report
9 listed anywhere in the report, yes or no? And if
10 you don't know, you can tell me that too.

11 A. No. It depends -- again, I reference
12 Mr. Deal's report Figure 5, okay.

13 Q. Which has 52 dates in it.

14 A. And the reason -- and then if you take
15 110, you can eliminate --

16 Q. Dr. Hartzmark, it's a simple question. I
17 don't know why you're arguing with me about this.

18 No, Michael, stop, I'm in the middle
19 of asking the witness a question so stop.

20 MR. BLATCHLEY: You interrupted the
21 witness.

22 MR. GIBBS: You have interrupted me now
23 twice.

24 BY MR. GIBBS:

25 Q. Dr. Hartzmark, this is maybe the simplest

1 question any deponent has ever been asked, and I
2 don't know why it's so difficult for you to give me
3 a straightforward answer.

4 You had said of the 52 dates listed
5 in Figure 5 of Mr. Deal's report, you identified 25
6 that you thought could or might reasonably be
7 expected to result in a statistically significant
8 price movement. My only question is whether those
9 specific 25 dates are listed anywhere in your
10 report. Is the answer yes or no or you don't know?

11 A. Well, it's certainly in what would be
12 backup because the dates were counted and we checked
13 each one. The dates -- specific dates, let's see,
14 based on 10-Qs and 10-Ks, again, referring to
15 Mr. Deal's report, there -- and, again, you don't
16 want me to go through this. I believe the
17 substantial majority -- all of them are listed in
18 Mr. Deal's Figure 5 and a substantial majority can
19 be identified specifically from Mr. Deal's report,
20 but I did not duplicate Figure 5 and list each day
21 in my report.

22 Q. You referenced backup --

23 MR. BLATCHLEY: Mr. Gibbs --

24 MR. GIBBS: No, no, no. Michael, I have
25 a question. I haven't even asked the question. You

1 don't get to object to your witness's answer. Okay.

2 You are still not answering the
3 question, right. I'm not asking you whether one
4 could try to apply your framework and identify the
5 dates you're talking about. I've only asked you
6 whether your report identified the specific 25 dates
7 that you're alluding to. I haven't seen it. I take
8 it from your roundabout answers that the answer is
9 no, but you've alluded to backup. So I understand
10 from your testimony so far that there is somewhere
11 an actual list of the 25 dates. Let me just ask
12 you, yes or no, have I correctly understood that, is
13 there a list somewhere?

14 MR. BLATCHLEY: So just objection --

15 THE WITNESS: In Mr. Deal's report.

16 MR. BLATCHLEY: Objection.

17 MR. GIBBS: I'm not -- no, no, no.

18 BY MR. GIBBS:

19 Q. Mr. Deal's report lists 52. You spend a
20 considerable portion of your report talking about a
21 subset of 25. You never list the specific 25 dates.
22 Do you have a list of the specific 25 dates
23 somewhere?

24 A. Let me explain what I did. I went --

25 Q. No. No. I have three hours with you,

1 and I'm not going to listen to this filibuster --

2 MR. BLATCHLEY: Mr. Gibbs, you've got to
3 let him answer the question when he starts to answer
4 a question.

5 MR. GIBBS: No, I don't. Michael, I
6 don't. I don't have to listen to a bunch of
7 filibustering. This is the simplest question
8 anybody has ever been asked and the amount of
9 argument and push back and roundabout and
10 misdirection that I'm getting is absolutely
11 outrageous, and I am a hair's breadth away from
12 pausing the deposition and calling the court because
13 this is ridiculous.

14 All I want to know is whether there's
15 a list of the 25 dates that are specifically
16 referenced repeatedly in your report, yes or no.

17 A. There is no --

18 MR. BLATCHLEY: And I want to clarify it
19 because I think the question, we might just be
20 speaking past each other. In Paragraph 112, there
21 is a table. I assume you are not referring to the
22 table in Paragraph 112. I just wanted to try to see
23 if that simplified what we are arguing about to
24 proceed smoothly with this deposition.

25 MR. GIBBS: No, it doesn't because I

1 don't see a list of dates in there. Do you?

2 BY MR. GIBBS:

3 Q. I'm asking if there's a list of dates
4 somewhere, anywhere.

5 A. There is no exhibit or table. I exported
6 Figure 5 from Mr. Deal's report, went through,
7 checked off 10-Qs, 10-Ks. It would have been
8 duplicative to do this, but if you need the
9 replication of that, it's in some backup document.

10 MR. GIBBS: Okay. I would -- I hereby
11 request a copy of that backup document so that I can
12 see the actual dates that are referenced repeatedly
13 in your report.

14 MR. BLATCHLEY: Again, just for the
15 record, in case it helps, Paragraph 112 has a table
16 listing where the 25 are coming from.

17 MR. GIBBS: I'm sorry. What was that?
18 What was the end of that statement, listing what?

19 MR. BLATCHLEY: Where the 25 are coming
20 from.

21 THE WITNESS: And they tie to
22 Paragraph 110 where it's described.

23 MR. GIBBS: Yes. I have actually read
24 both paragraphs. Thank you.

25 THE WITNESS: And 111.

1 MR. GIBBS: I read that one, too. And
2 yet I don't see a list of dates.

3 BY MR. GIBBS:

4 Q. In Paragraph 113, after the sentence I
5 read to you earlier about the 25 dates that might
6 reasonably be expected to have event a positive
7 price movement, you go on to say, this -- quote,
8 "this, of course, does not account for other factors
9 I identified such as contemporaneous disclosure of
10 negative information, which could further reduce the
11 number of days on which positive stock price
12 movements could reasonably be expected," close
13 quote.

14 Do you have that language in front of
15 you?

16 A. Yes.

17 Q. Am I correct in understanding your report
18 that you did not go do an analysis to determine
19 whether there was a contemporaneous disclosure of
20 negative information and whether such information
21 reduced the number of days in which positive stock
22 price movements could reasonably be expected?

23 A. As I described before on the front-end
24 misrepresentation -- alleged misrepresentation,
25 which are these dates, and omissions, I did not do

1 any further analysis.

2 Q. Referring back to the four dates out of
3 the 25 where both you and Mr. Deal identify
4 statistically significant abnormal returns, in your
5 view, does the existence of those abnormal returns
6 on four out of the 25 dates tell you anything about
7 whether the alleged false statements or omissions on
8 the other 21 dates had an impact on the price of
9 CenturyLink's common stock or bonds?

10 MR. BLATCHLEY: Objection to form.

11 BY THE WITNESS:

12 A. So are you asking if there's a dependence
13 between those four and the other 48 dates?

14 Q. No. I'm asking what I'm asked. I'll ask
15 the court reporter to repeat the question.

16 A. Read it back then. It's not a clear
17 question.

18 (Record read as requested.)

19 BY THE WITNESS:

20 A. No. No. I mean, like Mr. Deal, there's
21 nothing you can learn about whether there's evidence
22 of an absence of price impact on those other
23 21 days.

24 Q. Do you draw -- so I would -- go ahead.

25 A. No, you go ahead.

1 Q. So just to be clear, my question was
2 whether the existence of abnormal returns on four
3 days tells you anything one way or the other about
4 the possibility of price impact from the alleged
5 misstatements or omissions on the other 21 days. I
6 believe you said no, it doesn't. Did I hear you
7 correctly?

8 A. Yeah, but there's no evidence of a lack
9 of price impact for those 21 other days.

10 Q. I'm asking whether it tells you one
11 thing -- either way.

12 A. What?

13 Q. I'll rephrase.

14 Just to set the context, I was asking
15 what inferences one might draw from the returns of
16 those four days. Now, let me ask a slightly
17 different question.

18 In your view, does the absence of a
19 statistically significant abnormal return on the
20 other 21 days tell you anything about whether the
21 alleged false statements or omissions on those other
22 21 days had an impact on the price of CenturyLink's
23 common stock or bonds?

24 A. No. It doesn't tell you anything about
25 the price impact, whether there's an absence or

1 whether there is price impact.

2 Q. And back to the four dates and the
3 abnormal return observed on those dates, does the
4 existence of those abnormal returns tell you
5 anything about whether any of the alleged false
6 statements or omissions on those four dates had an
7 impact on the price of CenturyLink's common stock or
8 bonds?

9 MR. BLATCHLEY: Objection to form.

10 BY THE WITNESS:

11 A. Well, I think Mr. Deal and I would agree
12 that, you know, that's something you would look at
13 as a start, but unless you do a complete price
14 impact and loss causation analysis, you can't make a
15 conclusion one way or another, whether or not
16 there's an absence of price impact.

17 Q. Or price impact?

18 A. Or price impact.

19 Q. Okay. And I may have misspoken. So let
20 me just try to clarify the record here.

21 I have been talking about the 25 days
22 referenced in your report, four of which exhibited a
23 statistically significant positive abnormal return.
24 I may have suggested a couple of times in my
25 question that the remaining 21 did not exhibit any

1 sort of abnormal return, but that's not actually the
2 case. There were seven significant negative
3 abnormal returns and 14 without any statistically
4 significant abnormal returns. Is that consistent
5 with your understanding?

6 A. My understanding actually was that you
7 were stating that the other 21 did not have positive
8 statistically significant abnormal returns so I
9 answered that question based on that understanding.
10 If you want to ask it again related to negative
11 versus zero, I'm happy to answer that.

12 Q. No, no, that's fair. Okay. That's what
13 I was trying to ask. I think I may have misspoke
14 about the 21, but it doesn't change my question. So
15 I think your answer is responsive to my question.

16 Let me --

17 MR. BLATCHLEY: Patrick.

18 MR. GIBBS: Yeah.

19 MR. BLATCHLEY: Just a head's up, we're
20 coming up on an hour. If there's a good breaking
21 point any time soon, I just wanted to flag that for
22 you.

23 MR. GIBBS: Yeah, I appreciate that.
24 Actually, I have one question that I think -- it's a
25 request for an explanation of something in the

1 report that I think would be then a good break time
2 right after that.

3 BY MR. GIBBS:

4 Q. So, Dr. Hartzmark, I'm looking at
5 Paragraph 115 of your reply report. And you
6 conclude the paragraph by saying, "thus the four
7 days Mr. Deal identifies are approximately four
8 times as many would be expected by chance."

9 Do you see that language?

10 A. Yes.

11 Q. Can you help me understand the math you
12 used to arrive at four times as many as would be
13 expected by chance?

14 A. Yes.

15 Q. Okay. Please do so.

16 A. Simply, if you are thinking that
17 5 percent of the dates would be outliers and you
18 have 25 days, if you multiply .05 times 25, you get
19 right around one which would be the expected number
20 and here you have got four times as many.

21 MR. GIBBS: Okay. Thank you.

22 I think with that, it's a fine time
23 for a 10 or 15-minute break if that's okay with you.

24 THE WITNESS: 10 or 15 and then -- okay
25 and then we will do a short session and have some

1 lunch. I'll snack now to hopefully to be able to
2 last another -- maybe another hour. Does that make
3 sense?

4 MR. GIBBS: Yeah, but I don't think --

5 MR. BLATCHLEY: Guys, can we just break
6 so we get off the record and then we will discuss
7 timing?

8 MR. GIBBS: That's fine.

9 THE VIDEOGRAPHER: The time is 12:17 p.m.
10 and we are off the record.

11 (Whereupon, a break in the
12 proceedings was taken.)

13 THE VIDEOGRAPHER: The time is 12:43 p.m.
14 Central time, and we are on the record.

15 BY MR. GIBBS:

16 Q. Okay. I wanted to follow up a little bit
17 on the issue we discussed just before the break. We
18 were talking about Paragraph 115 of your reply
19 report, which notes that the number of days with
20 positive abnormal returns, four out of the 25 that
21 you're talking about there, is in your view four
22 times the number that would be expected by chance,
23 and you explained the math that you used to get to
24 that.

25 So my follow-up question is am I

1 understanding correctly that the conclusion one can
2 draw from that is that having four out of 25 days
3 with positive abnormal returns is not random?

4 A. I didn't draw that conclusion per se. It
5 I think that the -- I didn't do a test to determine
6 whether four was statistically significant as it
7 relates at the 95 percentile.

8 The point I was trying to do is that
9 Mr. Deal seemed to make a big deal out of the fact
10 that there as he called it were only, and I'm doing
11 air quotes, only four days out of the 52, which is
12 sort of a meaningless statement because he didn't
13 tell you what you would expect.

14 I just wanted to put some perspective
15 on that to say that not only is it out of 52 that's
16 wrong but the idea that four what are basically
17 earning dates for the most part, you know, is not
18 some small number as Mr. Deal seems to suggest.

19 Q. But on your point about what one would
20 expect, you would agree with me that as a general
21 matter, and for CenturyLink in particular, dates
22 when the company announces earnings are inherently
23 more likely than other dates to result in
24 statistically significant returns, whether positive
25 or negative, correct?

1 A. Well, I would, but Mr. Deal appears to
2 not believe in that because in his -- in his
3 discussion and critique of my event study, and I'm
4 trying to find specifically here, he calls the fact
5 that I use indicator variables or dummy variables,
6 as I believe he calls it, and I just want to clarify
7 because I think it's important because that's
8 another one of his contradictions is he would
9 believe that earnings dates would have statistically
10 significant news, and my cause and effect analysis,
11 which he for some reason calls a so-called cause and
12 effect analysis, even though it's a common, you
13 know, for his part, what he calls a causation, it's
14 the court's that have caused it. Needless to say,
15 the fact that there are four doesn't necessarily
16 tell you anything. And the fact is as it relates to
17 price impact, as I said before, the 21 doesn't tell
18 you anything if the information is material and
19 anticipated or if it is offset by some other
20 information.

21 Q. So setting aside your critique of
22 Mr. Deal, do you yourself draw any conclusions from
23 the fact that -- sorry. Let me start over.

24 For purposes of price impact, do you
25 yourself draw any conclusions from the existence of

1 four days with positive abnormal returns out of 25,
2 does that tell you anything about price impact or
3 not?

4 A. It tells me that it's likely there is no
5 evidence of a lack of price impact. As we have gone
6 through this before as it relates to the alleged --
7 the alleged misrepresentations and omissions that I
8 only went as far as saying that that is potential
9 evidence of a lack of price impact -- that is
10 potential evidence that there is price impact, but
11 you need to do a full and complete as opposed to a
12 preliminary and illustrative examination to make the
13 determination and nor do the four dates in
14 seclusion -- nor do the four dates in seclusion tell
15 you that the other 21 could not have price impact
16 without a -- without an analysis.

17 Q. So am I understanding you correctly that
18 you yourself don't believe there's any price impact
19 significance to the fact that there are four out of
20 25 days with positive abnormal returns?

21 MR. BLATCHLEY: Objection, asked and
22 answered, and misstates testimony.

23 BY THE WITNESS:

24 A. And the question makes no sense either.
25 You could have zero dates with statistically

1 significant -- with statistically significant
2 positive returns and still have price impact.

3 Q. I understand.

4 A. It is not evidence of a lack of price
5 impact.

6 Q. So I'm not asking about whether it's
7 evidence of a lack of price impact. I'm asking you
8 whether you believe it is evidence of a price impact
9 or not?

10 A. What is evidence of a lack of -- I'm --
11 go back because I'm totally confused at this point.

12 Q. I want you for now to set aside your
13 disagreement with Mr. Deal. I'm not asking you
14 about your disagreement with Mr. Deal. I understand
15 it. Okay. What I'm asking is whether you for -- in
16 your own view, is there any significance for price
17 impact to the mere fact that there are four out of
18 25 days with positive abnormal returns?

19 A. I couldn't measure but your -- it would
20 suggest there is -- no, I can't even say. And,
21 again, the disagreement that I have with Mr. Deal is
22 based on his report as opposed to his deposition
23 testimony because in his report, he seems to suggest
24 that you need to have a statistically significant
25 return to have any chance that there's, you know,

1 inflation introduced into a stock price, which he
2 then in his deposition fully described why he was
3 wrong with that statement. And so, therefore, you
4 can't infer anything by whether there's zero or
5 four. But, I mean, it's just those were four, those
6 are the four that he looked at, those are the four
7 that he said needed to be parsed, and -- but there's
8 no evidence of a lack of price impact on those four
9 dates, nor is there any evidence of a lack of price
10 impact on the other 21, nor is there evidence of a
11 lack of price impact on the other 27.

12 Q. Do you agree -- well, let me start over
13 with that. Let me ask a slightly different
14 question.

15 In your view, is there evidence of
16 price impact on the four dates where positive
17 abnormal returns were observed?

18 A. Again, we have gone through this time and
19 time again as to my analysis of what we call the
20 front-end or the alleged misrepresentations or
21 omissions. The evidence of price impact comes from
22 Mr. Deal's report, even though I don't even
23 necessarily agree. The evidence is the fact that he
24 says that it will be difficult to pars, i.e.,
25 separate the price impact from -- of the alleged

1 misrepresentations and alleged omissions from the
2 other information, the other factors that are
3 unrelated to the fraud.

4 And -- and that in and of itself
5 says, okay, let's just put them in two buckets.
6 There's a bucket of price change that's associated
7 with the fraud and there's a bucket of price change
8 that's associated with the nonfraud, and that's
9 implicitly saying that there's price impact.

10 But I -- I think you need a much more
11 in-depth analysis than Mr. Deal's preliminary and
12 illustrative analysis that he carries out in
13 Paragraph 72 to 76. That's his full analysis of
14 front-end price impact.

15 Q. Setting aside your interpretation of
16 Mr. Deal's discussion of the need to pars fraud from
17 nonfraud statements, setting that aside, do you
18 independently have a view of whether there is
19 evidence of price impact on the four dates out of
20 the 25 where there is a positive abnormal return?

21 A. Well, as I stated --

22 MR. BLATCHLEY: Objection. One second.
23 Just objection, asked and answered.

24 BY THE WITNESS:

25 A. Yeah, I mean, as I answered, I don't

1 know, at least three times before, I didn't do any
2 independent analysis for those four dates other than
3 to read Mr. Deal's alleged economic or purported
4 economic framework, which consists of one paragraph
5 per date which he points out, you know, a few of
6 the, you know, 40 or 50 or 60 financial metrics and
7 doesn't do anything to demonstrate that there's a
8 lack of price impact. There's no evidence in his
9 report that there's a lack of price impact from
10 May 8, May 8, 2014; for November 5th, 2015; for
11 December 7th, 2015; nor February 11th, 2016, the
12 four dates.

13 Q. Let me ask you a methodological question
14 if I could. For dates on which you have a positive
15 abnormal return that is statistically significant,
16 such as these four dates, what work do you think one
17 would need to do in order to reach an economically
18 valid conclusion as to whether any of the alleged
19 false statements or omissions on those dates had an
20 impact on the price of the company's stock?

21 A. It's speculative and it's associated with
22 loss causation, which we discussed in length in my
23 prior deposition as to separate it. But you would
24 use the tools of loss causation to demonstrate that
25 100 percent of the price increase was associated

1 with the other factors, and you would have to then
2 also, because that's not -- that's not -- that's
3 only the first step. And then you'd have to make
4 sure this that there weren't, for example,
5 offsetting negative impacts of some other factors
6 that somehow cushioned the misstatement or the
7 omissions. But I also don't understand the whole
8 concept here because as I understand it, especially
9 over a four and a half year period, the idea that
10 there has to be this mirror image is -- is just not
11 something that is generally the case between the
12 front-end and the back-end.

13 Q. Is it your view that in order to evaluate
14 whether any of the alleged false statements or
15 omissions on any of these four dates had an impact
16 on the price of CenturyLink's stock, you would have
17 to go through this sort of back-end loss causation
18 analysis?

19 A. I'm confused by that question.

20 Q. I can try it again if you'd like.

21 A. Sure, yeah, please.

22 Q. Okay. I'm trying to understand whether
23 you think it's possible to evaluate price impact
24 solely by looking at the front-end price reaction to
25 the alleged false statement or omission or without

1 going and looking at the price reaction to the
2 alleged corrective disclosure?

3 MR. BLATCHLEY: Objection, form.

4 BY THE WITNESS:

5 A. I think -- and this is a personal view
6 that that I think that could be very difficult, if
7 not -- I mean, it could be difficult.

8 Let me give you an example. You have
9 something that enhances revenue, possibly cramming,
10 or something of that nature, and over a four and a
11 half year period, you have basically a relatively
12 small amount at each period of time, and then you
13 have a disclosure that disclosed the aggregate
14 amount that had accumulated over time. That's --
15 you know, that is a situation where you can't have
16 this sort of mirror that Doctor or Mr. Deal appears
17 to believe as the classic, and I put that in quotes,
18 securities case. He describes this so-called
19 situation with the contract that doesn't exist where
20 there's a mirror image on the front-end that's
21 reflected in the decline on the back-end.

22 That is generally and, in fact, in my
23 experience almost never the case where you have
24 mirror image -- mirror images like that and,
25 therefore, the idea that only the, you know,

1 front-end or only, you know, that you need to
2 demonstrate something on the front-end is a much
3 weaker proposition.

4 Q. Yeah, I understand. My question really
5 isn't whether front-end is the only way to assess
6 price impact. I'm actually asking whether at least
7 conceptually it would ever be possible to test price
8 impact by looking only at the front-end, if you have
9 a view on that.

10 A. Only on the front-end.

11 Q. Hm-hmm.

12 A. I think it could assist the trier of fact
13 by examining the front-end, but I wouldn't want to
14 rely wholly on the front-end because, again, as I
15 mentioned, and as is generally the case in
16 securities fraud, you have periods, you know,
17 usually one, two, five years where there are
18 accumulated impacts, and then it's, like, you know,
19 putting water into a plant and -- I'm sorry, into a
20 pitcher. It's different than when I at one single
21 time take it out and pour it all into my glass.

22 Q. Okay. I think I understand that. Let me
23 turn now to a slightly different subject.

24 I want to ask you a couple of
25 questions about Paragraph 108 of your reply report.

1 In this paragraph --

2 A. One second, please.

3 Q. Oh, yeah, sure, let me know when you're
4 there.

5 A. Yes, I have read it.

6 Q. Okay. You write -- in the second
7 sentence you write, quote, "for example the
8 Complaint alleges that the company made
9 misrepresentations in its code of conduct but in my
10 experience, investors expect the company to adhere
11 to its code of conduct." And I'm stopping there
12 although the sentence goes on.

13 Is it your expert opinion that
14 investors expect companies to adhere to their codes
15 of conduct?

16 A. Well, I guess as an investor, a former
17 CEO and CFO, President and Chairman of the Board of
18 a public company, based on that, I would expect it.
19 It seems to be a natural.

20 You know, for example, I mean, if --
21 I mean, I don't expect to find out that the company
22 that I'm involved with has been sexually harassing
23 women even though the code of conduct says it won't.
24 I don't expect as an investor a company to be not
25 adhering to, you know, what it determines to be its

1 billing and sales practices. And then -- so I guess
2 that's based on an investor -- yeah, that it's --
3 and a head of a former public company and just I
4 guess economic logic.

5 Q. When you were the head of a public
6 company, did your company publish its code of
7 conduct or some similar statement of behavioral
8 expectations for its employees?

9 A. Of the behavioral?

10 Q. Yeah, code of conduct or some similar
11 thing outlining expectations for how your employees
12 would behave.

13 A. Excuse me one second. I just had a pop
14 up here. Sorry. Oh, no, no, no -- okay. Somebody
15 else was using my zoom accounts. I'm sorry. Okay.

16 Yeah, I'm sorry, I was flustered
17 there. Could you please ask -- it was while I was
18 the head of my public company?

19 Q. Yeah. You have alluded to your
20 experience as a head of a public company, and my
21 question is in that -- in that -- while you were the
22 head of that public company, did the company have a
23 published code of conduct that investors would see?

24 A. As it relates to certain issues, but the
25 one thing I can say is that if I -- if I take a code

1 of conduct, let's assume it's a certain language
2 like we -- I understand alleged here and then I
3 repeat it every quarter, that in and of itself
4 doesn't -- I wouldn't expect anything to change
5 because it's the same language over and over again.
6 So just that would suggest --

7 Q. I was asking a factual question, whether
8 the company you headed, which you've alluded to as
9 your experience, did you have a published code of
10 conduct, yes or no?

11 A. I can't remember. As it relates to what
12 issues? Sexual harassment? Accounting? What --
13 what -- what -- what code of conduct are you talking
14 about?

15 Q. I'm asking whether you had any published
16 code of conduct that your investors, your public
17 investors would have seen?

18 A. Well, I know I had to certify my
19 financials, which indicated that I followed certain
20 conduct every quarter.

21 I can't recall. I mean, I haven't
22 run my public company since 1999 so...but I think
23 the investors would be -- would have been quite
24 shocked if they would have found that, you know, I
25 don't know, that we were misstating revenue, and

1 that, you know, somehow, that was, even though
2 our -- and our code conduct said we would use GAAP,
3 for example.

4 Q. When you were the CEO of a public
5 company, did 100 percent of your employees comply
6 entirely with your codes of conduct 100 percent of
7 the time or did you ever have employees who
8 sometimes violated codes of conduct?

9 MR. BLATCHLEY: Objection.

10 BY THE WITNESS:

11 A. First of all, again, remember this is the
12 1990s, but we did have -- I know I remember we had
13 cases where there were sexual harassment violations,
14 where there were OSHA or EPA violations, and we had
15 to dismiss employees. I don't recall whether there
16 were any -- I mean, there were no financial
17 violations. I don't recall, though, whether I had
18 to dismiss, you know, an accountant -- accounting
19 person or whatever that might have violated GAAP or
20 my -- or the company's procedures -- practices and
21 procedures.

22 Q. Do you think that violations of your
23 various codes of conduct by individual employees
24 rendered your codes of conduct false and misleading?

25 MR. BLATCHLEY: Objection.

1 BY THE WITNESS:

2 A. I don't have a -- I don't have an opinion
3 on that.

4 Q. You can't say?

5 A. That my -- that's a legal question. I
6 can't say.

7 Q. Okay. Well --

8 A. If I published -- I mean --

9 Q. Let me -- let me -- let me bring it back
10 to the language of your report.

11 You say in your report that in your
12 experience investors expect a company to adhere to
13 its code of conduct. So let me ask the question a
14 slightly different way.

15 In your experience, do investors
16 expect a company to achieve 100 percent compliance
17 at all times by every single employee?

18 MR. BLATCHLEY: Objection.

19 BY THE WITNESS:

20 A. I don't have an opinion on that. That's
21 just not something I have ever actually even
22 contemplated.

23 Q. But you do have an opinion that investors
24 expect the company to adhere to its code of conduct.
25 You just don't have an opinion about what that

1 means?

2 A. No, I have an opinion that if I repeat
3 the code of conduct quarter after quarter, year
4 after year, that investors would be expected that I
5 would adhere to the code of conduct and --

6 Q. And does adherence to the --

7 MR. BLATCHLEY: Can we just let the
8 witness answer the question?

9 MR. GIBBS: Yeah. I was stopping. I
10 didn't realize he was going to go on so I stopped.

11 THE WITNESS: Okay. Go ahead.

12 BY MR. GIBBS:

13 Q. Are you done?

14 A. Yes.

15 Q. Okay. So you said that investors would
16 expect the company to adhere to its code of conduct.
17 I'm trying to explore what you mean by adhere in
18 that sentence in your report.

19 Does adhere to its code of conduct
20 mean 100 percent compliance at all times by all
21 employees?

22 MR. BLATCHLEY: Objection, vague -- hold
23 on one second.

24 Objection, vague, 100 percent
25 compliant.

1 BY THE WITNESS:

2 A. I really don't have -- I -- it's -- it's
3 my opinion that investors assume that legal behavior
4 is taking place within companies and we know just by
5 the fact there is an SEC that there might be illegal
6 activities that are violations that take place.

7 As to this 100 percent, I have not --
8 I have never done research on that. I don't know
9 what the research is. You know, I don't -- maybe,
10 you know, maybe it materially, you know, adhere to a
11 code of conduct, I don't know. But this is a legal
12 question, and I assume one that will be dealt with
13 by you-all.

14 Q. Well, it's actually one that you have
15 expressed a view on here based on your experience in
16 your report, but if you can't give me any further
17 insight into what you mean by investors expect a
18 company to adhere to its code of conduct, then I'll
19 move on.

20 A. Yeah, I --

21 Q. One more point on the front-end and then
22 we will go enjoy a discussion about the back-end.

23 In cutting down Mr. Deal's 52 dates
24 to 25 dates, you have cut out dates where there was
25 a duplicate announcement, correct?

1 A. Correct. Duplicate in the sense of
2 duplicate financial information that was disclosed
3 and following the procedures of a, you know, sort of
4 academic-based earnings analysis, which would
5 examine the earnings disclosure dates and not the
6 10-Ks or 10-Qs.

7 Q. Okay. And in that regard, your point is
8 if the company discloses financial information on
9 day one and then some number of days later, it
10 repeats that same financial information, you
11 wouldn't expect the price of the company's stock to
12 react to the repetition of previously disclosed
13 financial information. Have I understood you
14 correctly?

15 A. Well, understand that in an efficient
16 market, you assume that unanticipated material
17 information will be -- there will be a reaction to
18 that. So to the extent that material information is
19 disclosed in an earnings announcement that's
20 unanticipated, I would expect to see some price
21 reaction.

22 To the extent that it was based on a
23 financial -- material financial information that is
24 disclosed yet again in a 10-Q or a 10-K, it's not
25 unanticipated and, therefore, I wouldn't expect in

1 an efficient market for there to be a price
2 response. If there's additional information that
3 potentially is material in the 10-Q or 10-K, then I
4 would, you know, maybe one of these would have been
5 statistically significant.

6 But, again, I'm using an
7 academic-based approach even though Mr. Deal doesn't
8 consider it such, but I'm just, you know, on
9 earnings dates, that's generally the
10 information-rich days that he describes, not the
11 other -- not the other in the case, you know, 27
12 dates or repetitive dates.

13 Q. And I asked you about how you would go
14 about testing for price impact for the 25 dates
15 where you might expect a price reaction. I wanted
16 to ask you the same question for the 27 dates where
17 you believe that one would not expect any price
18 reaction to the alleged false or misleading
19 statements.

20 For those dates disclosures that you
21 would not expect to cause a sort of front-end price
22 impact, how would you go about testing whether there
23 was price impact for those types of disclosures?

24 MR. BLATCHLEY: Objection, vague, but go
25 ahead.

1 BY THE WITNESS:

2 A. Yeah, and I have got to be careful
3 because you made some statements and I want to make
4 sure that I'm not endorsing those statements.

5 For those 27 days when, you know, for
6 example, the 10-K or 10-Q repeats a
7 misrepresentation, one would look at and do the same
8 type of analysis, you would look at the statistics,
9 you'd look at analysts, you would look at the
10 company, you would look at the media, you would look
11 at internal documents, all of those types of things
12 to try to get a sense of whether this is material
13 information that is repetitive and that's why the
14 market is not responding, or if it's materials
15 positive information associated with a
16 misrepresentation, is there offsetting information,
17 or if it's something that just simply maintains
18 expectations, then I would ask myself if I saw a
19 statistically significant price movement why I might
20 have seen that. But at least I would have to go
21 through that those types of initial steps to begin
22 to look at whether or not there's evidence of a lack
23 of price impact.

24 Q. For a disclosure of the type that you put
25 into the 27 dates, the days when you would not

1 reasonably expect the stock price to react, is it
2 necessary to look at what we have been calling the
3 back-end in order to test whether the alleged false
4 statements or omissions had an impact on price or
5 can you do it without looking at the back-end?

6 A. I think you can look at the front-end,
7 but the back-end tells you the story, especially in
8 a situation like this where you have a
9 non-confounded disclosure. But I guess -- yeah,
10 that's my answer.

11 Q. Okay. The very first alleged false or
12 misleading statement in this case, if I'm recalling
13 correctly, is from March 1st of 2013. It's the
14 filing of the company's annual report on form 10-K
15 for the 2012 fiscal year, and you can confirm that
16 by looking at page 41 of Mr. Deal's report, that's
17 Figure 5.

18 A. Figure 5, page 41.

19 Q. Yes. Correct.

20 A. Give me one second because I would like
21 to look at the information. Oh, you did it again.
22 You didn't publish my appendices. I'll note that
23 for the record, that the appendices to exhibit --
24 that's my reply report. Oh, Exhibit 2 does not have
25 my appendices. Okay. So I'll go to Mr. Deal's --

1 okay. March 1st, it was a 10-K. Right. Correct.

2 Q. Okay. And so this one would be a
3 duplicate in the sense that it is repeating
4 financial information disclosed on the earnings
5 announcement that proceeded the filing of the 10-K,
6 correct?

7 A. Yes. That would -- yes.

8 Q. Okay. And so because it's repeating
9 financial information that was previously disclosed,
10 you would not have expected to see the market react
11 at least to the financial information that is
12 included in the March 1st, 2013 10-K, correct?

13 A. React to the financial information, I
14 wouldn't necessarily -- again, I didn't say it has
15 to. It might, but I wouldn't necessarily expect
16 there to be a statistically significant positive
17 return if it's just repeating the same information.

18 Q. And to the extent that a disclosure is
19 repeating information previously disclosed and you
20 want to evaluate price impact, would you want to go
21 back and look at the original disclosure of that
22 information and see if there was a price impact?

23 A. One could possibly do that. It's not
24 necessary. I mean, this could be maintaining
25 price -- maintaining prices. The other issue could

1 be that you might find -- you would want to do the
2 same type of analysis at least when you would take a
3 look at it and then you would have to examine the
4 confounding factors, try to understand whether it's
5 a growing thing, say revenue is often a growing
6 issue as you go through time and so it could be,
7 again, like I talked about drops, you know, a little
8 pour in a bucket as opposed to pouring out the
9 bucket of water.

10 So, yeah, that's -- that's something
11 you might want to try to do if you were trying to
12 show an absence of price impact.

13 Q. Did you do that here? Did you go look at
14 the earnings date that preceded the March 1st, 2010
15 10-K?

16 A. As I have said now I would say it would
17 be at least four times, Mr. Deal did not do any
18 examination actually of this date other than to put
19 it in his Figure 5, and I was just opining that
20 there was no evidence of a lack of price impact on
21 the disclosures made on the 1st of March 2013. And
22 that was the extent of my discussion. I did not do
23 that and especially because Mr. Deal, as I
24 understand it, was not asked to evaluate whether
25 there was an absence of price impact nor did he

1 present any evidence of price impact or the absence
2 thereof for that particular date.

3 Q. Do you know whether the plaintiffs in
4 this case are claiming that the February 13 earnings
5 announcement that preceded the March 1st 10-K was in
6 any way false or misleading?

7 A. I don't recall. You know, oftentimes
8 class actions are limited. But that's a legal
9 question. I don't know. I just don't know.

10 Q. Okay. We have talked a little bit about
11 the use of what we have been calling back-end
12 evidence or back-end stock price movements, and we
13 have talked about using a loss causation analysis to
14 draw conclusions about price impacts. I want to
15 turn to that subject. Okay.

16 And to start with, I'd like to
17 explore with you how it is conceptually that one can
18 look at the stock price movement following a
19 corrective disclosure and reach conclusions about
20 the price impact of a prior alleged misstatement or
21 omission. Are you with me?

22 A. I believe so. The -- Okay. Yes. So far
23 I'm with you.

24 Q. Okay. So we will start -- let's try to
25 make it a little bit concrete. The first alleged

1 corrective disclosure in this case is June 16 and it
2 relates to press reports about a lawsuit filed by a
3 former CenturyLink employee named Heidi Heiser.

4 Does that sound right to you?

5 A. Yes. I think I describe in my opening
6 report when I examined the statistical properties of
7 that that on -- well, yes. I won't -- yep, that's
8 my understanding. There's a Bloomberg story that
9 talks about sales practices and billing, et cetera,
10 associated with CenturyLink.

11 Q. Okay. I'd like you to explain to me
12 conceptually how it is that one can begin with the
13 stock price decline following the Bloomberg article
14 about the Heidi Heiser complaint and draw
15 conclusions about the price impact of alleged false
16 statements and omissions made many, many months or
17 even years earlier, how do you connect those two
18 things up conceptually?

19 A. Well, it's the sort of thing you do in a
20 loss causation analysis, and I have done that where
21 you examine the corrective disclosures and linked
22 them back. I think the -- you know, so, you
23 would -- you know, in a loss causation analysis do
24 that, but I haven't been asked to do a loss
25 causation analysis.

1 Q. That's fine. I'm not asking you to. I'm
2 asking you how does the stock drop following the
3 Heiser-related disclosure tell you anything about
4 the impact of allegedly false statements or
5 omissions made many months later? How does one do
6 that conceptually?

7 I'm not asking you to run the
8 numbers. I'm asking you conceptually what does
9 stock price decline following a corrective
10 disclosure have to do with alleged price impact of
11 statements or omissions made many months or years
12 earlier?

13 A. Again, I would suggest that there's no
14 mirror image, meaning that Mr. Deal's analogy, his
15 example of the contract and linkage between the
16 falsity of the contract and then the disclosure of
17 that falsity, they're not mirror images. You have
18 to take the corrective disclosure in a loss
19 causation of damages report that might be material
20 and go back and link it to various misstatements,
21 and as I say, various misstatements because you have
22 misstatements over a long period of time.

23 I'm the statistician, I'm the
24 economist, and therefore, I'm looking at the
25 numbers. I haven't done that type of analysis

1 because it's premature, it's not necessary, to
2 demonstrate whether the market is efficient or
3 whether the damages methodology can be applied
4 class-wide and is common.

5 But the linkage is really, again,
6 something you would do in a loss causation report
7 and something that you would do -- again, it's going
8 to be really considered by the trier of fact. In
9 fact, as I understand it, the trier of fact has
10 already suggested that the misrepresentations at
11 least reasonably caused the losses that were
12 observed on June 16, June 19, and July 12, 2017.

13 Q. What kind of work or analysis would one
14 have to do to establish the type of linkage that
15 you've referred to between the alleged corrective
16 disclosure on the one hand and the alleged false
17 statements or omissions on the other hand?

18 A. For example, hypothetically, I have
19 examined situations where you show generally,
20 usually, internal documents, say, for example,
21 accounting issues, where there are, I don't know,
22 revenues, fees, costs, some type of financial metric
23 that are misstated, and then you look at the end and
24 you see there's a disclosure of that misstatement.
25 I mean, that links it together. That's one

1 hypothetical way and actually a real way that I have
2 looked at the issue that tie the back-end to the
3 front-end.

4 Q. Okay. So that's one example, but you are
5 not able to describe for me just conceptually how
6 you would do it across a number of cases?

7 A. I think that would --

8 MR. BLATCHLEY: Objection. Go ahead.

9 BY THE WITNESS:

10 A. I think that's entirely speculative at
11 this point. I haven't been asked to do a loss
12 causation analysis nor has Mr. Deal. I'm responding
13 to his report. The four corners of my report
14 explain my opinions. I was not examining -- I
15 didn't take into a loss causation analysis.

16 Q. Okay. Let me -- let me ask you then some
17 hypothetical questions because I believe I'm allowed
18 to do that.

19 Let's suppose that Heidi Heiser's
20 lawsuit was not revealing some fact previously
21 concealed by the company but, in fact, her lawsuit
22 was made up, overblown, wildly overstated. In that
23 situation, would the stock price reaction to her
24 lawsuit establish price impact from alleged false
25 statements and omissions many months earlier?

1 MR. BLATCHLEY: Objection, form.

2 BY THE WITNESS:

3 A. Well, I think your statement itself
4 established price impact because you suggested some
5 type of I'll call it amplification where it's
6 overblown, overstated. That doesn't mean that it's
7 wrong or false. If the trier of fact determines
8 that it is false and, therefore, 100 percent that
9 the reduction on the price at the corrective
10 disclosure by Ms. Heiser's suit, that that is
11 something, again, that I think will be determined at
12 trial, but to the extent when you say overblown or
13 amplified, that suggests that there's at least a
14 partial element of truth, it suggests that in a loss
15 causation time, one is going to have to, as I
16 mentioned, separate the fraud from the nonfraud and
17 you are hypothetically throwing what you called
18 consider overblown amounts to be nonfraud, but that
19 still tells you that there's a portion of that price
20 reduction, decline that is associated with the
21 misrepresentations that took place over the prior
22 period of time. And as I understand it and as
23 Mr. Deal never demonstrated that 100 percent of that
24 decline was due to anything other than the fraud.

25 Q. Do you think that Heidi Heiser's

1 complaint is a corrective disclosure if a single
2 CenturyLink employee one time engaged in one
3 instance of cramming for an entirely insignificant
4 amount of money, would Heidi Heiser's complaint,
5 therefore, be partially corrective and, therefore,
6 establish price impact?

7 MR. BLATCHLEY: Objection.

8 BY THE WITNESS:

9 A. I'm not -- I'm not here as a fact witness
10 or a trier. I mean, I just can't take a
11 hypothetical like that and do it. It depends on so
12 many different related factors, and it's just -- I
13 don't think that's a question that as a financial
14 economist that's been tasked with trying to
15 determine whether the market is efficient, trying to
16 demonstrate that there's a common damages
17 methodology, and then respond to Mr. Deal's report
18 where he didn't even look at the issue of meaningful
19 analysis of price impact on the last day or the
20 evidence that's lacking, I can't answer that legal
21 question or fact question.

22 Q. Let me clarify it because I'm not
23 actually asking you a legal question or a fact
24 question. So let me ask it a little more clearly.

25 As an economic matter, I want to ask

1 you to assume a set of facts and then tell me how
2 you would view those facts as an economic matter.
3 Okay.

4 So let's assume that there is a
5 relatively small amount of cramming going on by
6 employees at CenturyLink who were violating the
7 company's code of conduct; when caught, they are
8 disciplined; and the dollar amounts of the cramming
9 is insignificant to the company's reported financial
10 reports or results. Okay.

11 Do you understand the hypothetical
12 set of facts I'm laying out for you?

13 MR. BLATCHLEY: Objection to the
14 hypothetical.

15 Go ahead.

16 BY THE WITNESS:

17 A. Yeah, I mean, I can understand the
18 hypothetical. Whether they're facts, I don't know.
19 Maybe assumptions that you are asking me about.

20 Q. I am. I'm asking you to make these
21 factual assumptions so that I can then ask you a
22 question about how you would analyze those assumed
23 facts as an economist. Okay. Just like you have
24 done with the plaintiff's allegations. Right.
25 You've assumed their allegations will be proven true

1 and you have offered a number of economic opinions
2 based on that assumption.

3 I'm asking you to assume a different
4 set of facts, and I want to talk about how you would
5 analyze this different set of assumed facts as an
6 economist.

7 So let me -- let me restate and
8 refine it a little bit, if I may.

9 I want you to assume that contrary to
10 what Ms. Heiser alleged in her complaint, that
11 CenturyLink's senior management did not condone or
12 encourage cramming. They had policies and codes of
13 conduct that prohibited cramming. Notwithstanding
14 those policies and codes of conduct, some relatively
15 small number of employees sometimes engaged in
16 cramming. When they did so, they were disciplined,
17 and the total dollar amount of those instances was
18 insignificant to the company's reported financial
19 results.

20 With that set of assumed facts, would
21 the allegations in Heidi Heiser's lawsuit and the
22 resulting stock price reaction establish price
23 impact for any of the front-end allegedly false and
24 misleading statements in this case?

25 MR. BLATCHLEY: Objection to the

1 hypothetical, but go ahead and answer.

2 BY THE WITNESS:

3 A. Would any of those facts establish price
4 impact on the front-end? I have no opinion on price
5 impact on the front-end, but they certainly don't
6 establish a lack of price impact on the front-end.

7 Q. All right.

8 A. For the record, Mr. Gibbs, again, has
9 decided that my answer is funny. I never -- I'll
10 tell my children that I do have a sense of humor,
11 but he was smiling. I thought I was correct.

12 Q. I was smiling, indeed. I even chuckled a
13 little bit. I suspect the video record will show
14 that as well.

15 What is it that you think the
16 Bloomberg report about Heidi Heiser's lawsuit
17 disclosed to the market?

18 A. It's my understanding that the Heidi
19 Heiser lawsuit disclosed to the market issues
20 associated with financial reports possibly being a
21 little misleading, the cramming activity possibly
22 existing, and possibly even changing over time, the
23 issues associated with honesty at the corporation,
24 disclosed potential regulatory risks, various what
25 might be considered omissions, and that type of

1 information.

2 Q. Do you think Ms. Heiser's allegations
3 about CenturyLink engaging in a Wells Fargo-like
4 scam was the revelation of an issue about financial
5 statements being potentially a little bit kind of
6 misleading, is that really your understanding?

7 MR. BLATCHLEY: Objection, misstates
8 testimony.

9 BY THE WITNESS:

10 A. Yeah, I didn't write the complaint. I
11 understand that the allegations are such, but
12 that's -- again, you are asking me to interpret that
13 and I -- you are asking me for a factfinding
14 mission. I'm not here as a factfinder as to whether
15 the allegations associated with Ms. Heiser's
16 disclosure is -- includes -- I mean, it's my
17 understanding that plaintiffs allege that it
18 includes all the issues that I discussed just
19 before, but I'm not here to determine one way or the
20 other. It doesn't have any impact on my decision or
21 my opinion that there is -- the market is efficient,
22 that there is a common damages methodology and that
23 Mr. Deal has failed to provide any evidence of a
24 lack of price impact.

25 Q. Let me ask you this: Let's say that

1 Heidi Heiser's allegations turn out to be simply
2 false, what she said was not true. In that
3 situation, would the filing of her lawsuit and
4 reports about her lawsuit amount to corrective
5 disclosures?

6 A. That's for the judge to determine. At
7 this point, the judge has, as I understand, and I'm
8 not a lawyer but I did read the order, has said that
9 there's a reasonable idea that those disclosure
10 caused investor harm.

11 Q. Again, I'm not asking you as a legal
12 matter. I'm asking you as an economic matter. If
13 Ms. Heiser's allegations were false, would you as an
14 economic matter believe it appropriate to use the
15 stock market's reaction to those allegations as a
16 measure either of loss causation or of price impact
17 from the allegedly false or misleading statements?

18 MR. BLATCHLEY: Objection to the
19 hypothetical and asked and answered.

20 BY THE WITNESS:

21 A. First of all, we haven't done a loss
22 causation analysis. I'm not making any statements
23 related to the loss causation. I haven't done it.
24 I haven't anticipated it. For the purposes of my
25 report, and we went through this before, I assume

1 the allegations will be proven true at trial.

2 If Ms. Heiser's allegations are found
3 to be false and the trier of fact determines that
4 the information disclosed revealed -- maybe it even
5 revealed worse abuses of the code of conduct and
6 financial, you know, I can't tell you. It's up to
7 the finder of fact to make that determination.

8 What I can tell you is, first of all,
9 whatever his facts are, I can apply that. If he
10 suggests that, yes, that's false, but yes, it
11 reveals weaknesses within the company and,
12 therefore, the allegations are true and that that
13 price represents a reasonable estimate of the harm
14 to investors because of misrepresentations, I can
15 apply that, I can calculate damages based on a
16 common methodology.

17 I can also say that, again, based on
18 the fact that there is a statistically significant
19 negative return on that date, that that follow on
20 analysts discussion both in terms of numbers,
21 commentary, and their recommendations, the board
22 actions, the internal documents, all of that would
23 suggest that there is price impact. But it's
24 certainly the case that Mr. Deal never showed that
25 there's a lack of price impact from that, even if

1 those allegations turn out to be false.

2 Q. Let me try to -- let me try this a
3 slightly different way because I really am trying to
4 get at your understanding of how certain facts and
5 evidence should be viewed economically speaking.
6 Okay.

7 So if I understand correctly, one way
8 in which an economist might use the stock price
9 reaction to a corrective disclosure to establish or
10 measure price impact from a prior misstatement or
11 omission is to test in essence whether the
12 corrective disclosure is revealing something that
13 those prior misstatements or omissions concealed.
14 And I understand your point about not needing a
15 mirror image disclosure, but am I -- understanding
16 that, am I correct that the way in which this loss
17 causation analysis relates to a price impact
18 analysis is if the disclosure is corrected, if it's
19 revealing at least in some sense something that the
20 alleged misstatements or omissions concealed, then
21 the market's price reaction to that revelation can
22 help us identify and calculate the price impact of
23 the prior misstatement or omission; is that fair?

24 MR. BLATCHLEY: Objection, form.

25 Go ahead and answer.

1 BY THE WITNESS:

2 A. You know, I don't think that is -- I
3 mean, maybe in a -- maybe in a perfect world you can
4 look at one price reaction and infer all the others,
5 but let me go back to my pitcher of water, okay, and
6 my empty glass of water.

7 If I do this -- I'm going to do this
8 five times. Okay. Now, I'm going to pour out this
9 water. I can tell you how much water I poured out.
10 Can you tell me what each of the five amounts of
11 water that went in are? That's the relationship
12 between the front-end and the back-end.

13 So, yes, it can sort of give me a
14 road map. That's why courts have often used things
15 like constant dollar, constant percentage, and index
16 inflation as it relates to damages. I mean,
17 inflation driven. But is there a one-to-one -- I
18 mean, and wasn't that different than this where I'm
19 now going to do 3, 4, 5, 6, 7, 8, 9, 10. I
20 basically have the same glass, but a whole different
21 set. So that's your hypothetical in a glass of
22 water.

23 Q. Respectfully, it's not, and I worked
24 pretty hard.

25 MR. BLATCHLEY: Patrick --

1 MR. GIBBS: Michael, I'm about to ask a
2 question. I haven't said anything yet.

3 MR. BLATCHLEY: I was just going to
4 suggest that it has been an hour. If there's a good
5 breaking point coming up, I just wanted to flag it.
6 That's all.

7 MR. GIBBS: That's fine. I wanted to
8 finish this sequence though.

9 BY MR. GIBBS:

10 Q. So I worked pretty hard in my
11 hypothetical to note your strongly-held view that
12 the corrective disclosure does not have to be
13 identical to the alleged misstatement or omission or
14 the concealed fact. Okay. And I'm acknowledging
15 that again.

16 But surely you would agree that as an
17 economic matter, for the stock price reaction to a
18 corrected disclosure to have any bearing on price
19 impact from the alleged misstatement or omission,
20 there has to be some relationship between the fact
21 disclosed by the corrective disclosure on the one
22 hand and the facts concealed by the alleged
23 misstatement or omission on the other hand.

24 Can you agree with that?

25 A. Yes. There has to be some linkage

1 between the corrective disclosure and the
2 information disclosed there and the information
3 that's misrepresented or omitted during the four
4 plus years prior, yes.

5 Q. Okay. And -- okay. Wonderful.

6 Moving away from the factual
7 allegations in this case and purely as a conceptual
8 matter, can you also agree with me that if the
9 alleged corrective disclosure is an accusation that
10 turns out to be false, then the stock market's price
11 reaction to that false allegation tells you nothing
12 about the price impact of a prior alleged
13 misstatement or omission?

14 A. I guess from my glass of water analysis
15 the amount of the corrective disclosure, whether
16 it's false or true, won't tell you anything about a
17 specific front-end misrepresentation or omission.
18 You can attempt to link it from an economic
19 perspective with respect to discussion of analysts,
20 with respect to what has been disclosed and the
21 information disclosed, but in terms of the
22 statistics and the economics behind it, I don't see
23 how it -- you know, unless you have the most perfect
24 world could even come close to mapping back there.

25 And here's one of the issues, and

1 I've mentioned it before, economists -- in terms of
2 our role. I'm not a trier of fact. I don't deal
3 with nuance per se. I have to deal with issues
4 associated with statistics to support my conclusions
5 and, therefore, on the front-end, the statistics,
6 you know, might -- might be, you know, very
7 different than on the back-end, but that's I guess
8 why the courts have generally focused, at least in
9 my experience, on the back-end.

10 Q. So I literally have no idea what you just
11 told me. So let me try to ask a different question.

12 Assuming, again, that an alleged
13 corrective disclosure turns out to be an accusation
14 that's false. Are you saying there are
15 circumstances where you might nevertheless conclude
16 as an economic matter that the market's price
17 reaction to the publication of that false allegation
18 can be evidence of loss causation and/or evidence of
19 price impact from the alleged false or misleading
20 statements many months prior?

21 MR. BLATCHLEY: Objection to the
22 hypothetical.

23 BY THE WITNESS:

24 A. I think even your hypothetical, yes.
25 Hypothetically, again, you're taking a very

1 narrow -- you're saying, okay, there's accusations
2 made by Ms. Heiser, they turn out to be false, but
3 then you have got to look beyond that. Does it
4 signal to the investment community some issue with
5 respect to the internal controls with the company,
6 management's reputation and trust, other possible
7 underneath issues. I can't answer that
8 specifically.

9 What I can say is that assuming the
10 allegations are proven at trial, that the fact that
11 you have a statistically significant return, that
12 you have analyst discussion, that you have analyst
13 commentary, that you have analyst recommendations,
14 that you have board activity, that you have internal
15 discussion would suggest -- would suggest that
16 there's price impact.

17 And I can go back to it again, that
18 if you want to be like Mr. Deal and just assume that
19 the facts are going to be proven at trial to be
20 false and that the judge is going to determine that
21 the company is not liable, then, yes, maybe you
22 could come up with some, you know, reason why, you
23 know, that that corrective disclosure and the price
24 impact is not -- I'm sorry -- and the price decline
25 is not price -- not evidence of price impact.

1 But Mr. Deal has done nothing other
2 than assume away the case, put himself in the
3 trier -- put himself in as trier of fact to
4 demonstrate that none, 100 percent, of that price
5 decline is due to other factors.

6 MR. BLATCHLEY: Patrick, can we pause
7 here for a break? Is this a good time?

8 MR. GIBBS: Now is a fine time for a
9 break.

10 THE VIDEOGRAPHER: The time is 1:52 p.m.
11 Central time, and we're off the record.

12 (Whereupon, a break in the
13 proceedings was taken.)

14 THE VIDEOGRAPHER: The time is 2:25 p.m.
15 Central time, and we are back on the record.

16 BY MR. GIBBS:

17 Q. Before the break, we were talking a
18 little bit about the first alleged corrective
19 disclosure in this case, which is a news report on
20 Friday, June 16, 2017, concerning Heidi Heiser's
21 lawsuit. I want to ask you a few follow-up
22 questions about that and about subsequent alleged
23 corrective disclosures.

24 And in particular, I'm looking at
25 Paragraph 152 of the Consolidated Securities Class

1 Action Complaint, which has been marked as
2 Exhibit 1. You don't have to, but if you could like
3 to have it in front of you, that would be fine.

4 A. What page is that?

5 Q. 71.

6 A. 71. Okay. And it's Paragraph 152.

7 Q. Correct.

8 A. Okay. Let me take a look.

9 Okay. I have read Paragraph 152 of
10 the Complaint.

11 Q. Okay. And I want to be very clear that
12 I'm not asking you to read me the allegations in the
13 Complaint or repeat them to me. I'm trying to get
14 your insights as an economist.

15 So my question is in light of the
16 facts that were allegedly revealed by the press
17 about the Heiser lawsuit on June 16, 2017, do you
18 have any understanding as an economic matter what
19 additional facts were revealed by either the news
20 about several consumer class action lawsuits being
21 filed over the weekend and into June 19, or news
22 about the filing of the Minnesota Attorney General's
23 lawsuit on July 12?

24 A. That's a lengthy question with three
25 dates. So there's Heidi Heiser's announcement --

1 read it back to me. Maybe because I --

2 Q. Let me -- I'll try --

3 A. It was a lengthy question.

4 Q. Let me try it to break it down.

5 As a very direct matter, I'm trying
6 to figure out whether you have a view as an economic
7 matter of whether the corrective disclosures after
8 June 16 revealed anything new, again from an
9 economic perspective?

10 A. From an economic perspective, the price
11 reactions of the stock and the bonds after June 16,
12 meaning June 19 and July 12 in particular, is
13 consistent with the revelation of new material,
14 unanticipated information.

15 Q. Do you have an understanding of what,
16 from an economic standpoint, the new or
17 unanticipated information was?

18 MR. BLATCHLEY: Objection to form.

19 BY THE WITNESS:

20 A. From an economic standpoint?

21 Q. Yes.

22 A. Again, I'm not being put up as I
23 understand it as a witness to interpret the law or
24 to prove whether the corrective disclosures were
25 true or not or approved liability.

1 From an economic perspective what you
2 do is you first look or I look in a securities case
3 as the expert economist at the statistical evidence.
4 That's the first part of that.

5 What I then have done, as did
6 Mr. Deal, was look at the other evidence that
7 economists would often rely on such as the number of
8 analyst reports, what the analysts were saying, and
9 the nature of their recommendations.

10 In this particular case, I also -- I
11 looked at -- I looked at elements associated with
12 the filing of a 13D by Corvex. I looked at the
13 follow-on denial by the company after the close of
14 the market. I looked at the board activities. I
15 looked at the -- I also noted as well that just
16 based on that period throughout June 16 to July 12
17 that Morningstar considered the fair market value to
18 have declined by \$2 a share, which is not
19 statistically different from the decline that was
20 observed over that period, and that is sort of how
21 an economist would put that all into a pot.

22 And once I looked at all of that and
23 then evaluated Mr. Deal's analysis of that period,
24 realized that he had provided no evidence of a lack
25 of price impact and that based on the fact that he

1 felt that parsing might be required or that some
2 so-called ambiguously defined factor such as what he
3 calls FUD, F as in fraud, U as in utility, and D as
4 in doubt, that that might have caused it, and to the
5 extent that the court might find that independent,
6 still does not provide evidence of a lack of price
7 impact.

8 So that's how I would look at it from
9 an economic perspective.

10 Q. Can you put into words for me what it is
11 that shareholders knew from an economic perspective
12 at the end of the day on June 19 that they did not
13 know at the end of the day on June 16?

14 A. One thing was the specifics associated
15 with the fact that there were substantial -- or
16 lawsuits that could have substantial liability
17 related to consumers.

18 The other thing that they learned
19 after the market closed on June 16 was that one of
20 the large shareholders was supporting the company.

21 Another thing that they learned after
22 June 16 was that the -- that, you know, they learned
23 about whatever the analysts' interpretation of the
24 information was because there were a number of
25 analyst reports that were issued.

1 They learned -- there's one other
2 element that they had learned related to June 19 --
3 June 19 that -- well, that's all I can remember
4 right now. But that there was --

5 Q. Okay.

6 A. -- you know, new information.

7 Q. Thank you.

8 I want to ask a little bit about an
9 issue where you and Mr. Deal have had something of a
10 debate and it relates to the length -- I think the
11 way to put it is the length of the event window
12 that's properly considered.

13 In simple terms, I think Mr. Deal has
14 expressed the view that in looking for the price
15 impact of corrective disclosure, we should look at
16 the closing date on the date of the disclosure.

17 You, at least as to June 16 through
18 June 19, have looked at what might be called a
19 two-day event window. Am I fairly summarizing the
20 debate, the different positions?

21 A. Well, it's not quite two days. The
22 announcement took place at 1:50 so it is really two
23 hours. That's Mr. Deal's opinion, that it should
24 respond within two hours. And especially as it
25 relates to bond markets, it shows sort of a lack of

1 experience and knowledge that you would expect it
2 to -- I mean, you know, obviously we went through it
3 last time. I have been involved in lots of bond
4 cases. I understand the institutional features and
5 characteristics of bond markets, understand the
6 difference between various securities markets and
7 time of reaction, but yeah, he believes there should
8 be, you know, two hours and I suggest that,
9 especially the nature of the information, how it's
10 disclosed might require a greater amount of time
11 between the fact that it was disclosed by a third
12 party.

13 It was information that Mr. Deal,
14 again another contradiction in his report, says at
15 one point, when he's talking about the two-day
16 window, oh, this is really relatively
17 straightforward information, and then on the other
18 hand says parsing it is something that is going to
19 be too challenging and too complex to be able to
20 account for it, but needless to say, this is
21 information that would be difficult to quantify, it
22 would take some time to fully digest and process,
23 and so the idea of the two-day window especially as
24 it relates to the 7.6 percent note is totally
25 appropriate, has academic basis, has the court

1 endorsement, and I think for me I got that, and for
2 him, it's his basic opinion, personal opinion.

3 Q. Let me turn to the academic support
4 because you mentioned it several times in your reply
5 report and you've mentioned it again here now.

6 In terms of academic support for a
7 two-day or longer event window, I see a citation to
8 a single article in footnote 115 at page 39 of your
9 reply report, which is citing an article by Craig
10 McKinley entitled Event Studies in Economics and
11 Finance.

12 Is there any other academic support
13 that you can point me to for the use of a two-day or
14 greater event window?

15 A. Well, first of all, again, we're talking
16 about a corporate bond and the one article that I
17 can talk -- it is stock related. There are a number
18 of articles related to the stock, but even the
19 article that talks about the speedy response, which
20 is consistent, potentially, with this type of --
21 certainly the stock, is Patel, I forgot who the
22 co-author is, where they talk about how it's
23 generally a fairly quick reaction, but that there's
24 also additional reaction overnight, and that makes
25 sense especially when you have a situation like we

1 do here where you're at the end of the day, there's
2 a disclosure, there's one analyst report, which is
3 actually a recommendation to go from a buy to a
4 hold, so a negative recommendation based on the
5 disclosure, and then over the weekend and the next
6 day, there are a whole bunch of other analysts'
7 reports. And as you know, analysts themselves
8 provide information because they digest and then
9 disseminate that information throughout.

10 So I'm not sure -- again, Mr. Deal
11 cites to no article. It's his opinion. I have
12 had -- you know, I'm not sure how many more articles
13 you want, but I have had my opinion accepted in
14 corporate bond matters by many courts and there it's
15 generally the case that multiple days are clearly
16 relevant. You look at each one separately. It is
17 different -- I agree that the analysis associated
18 with earnings announcements where everybody
19 congregates because it's preannounced when something
20 is going to happen, when, even though there are all
21 the metrics that Mr. Deal discusses come out
22 generally, they're looking at EPS, EBITDA, EBITDA
23 multiples, that that type of information is -- you
24 know, you can see the types of reaction, and we saw
25 the types of reaction to the Bloomberg that it

1 happened, the initial reaction was within, you know,
2 minutes.

3 Q. Are you finished?

4 A. Yes.

5 Q. Let me try one more time. My question is
6 really rather simple.

7 Other than the McKinley article that
8 is cited in footnote 115 on page 39 of your reply
9 report, can you cite me to any specific academic
10 support for the use of a two-day or greater event
11 window in an event study?

12 A. Boy, there's a whole series of articles,
13 especially the articles discussing merger
14 announcements, other types of offering announcements
15 where it's multiple day windows. But I can't tell
16 right now. I could go to my library or whatever,
17 but this is something that I think especially for
18 corporate bonds is just not controversial for
19 anybody experienced in the arena.

20 Q. Let's set the bonds aside now.

21 Can you cite me to any academic
22 support for the use of a two-day or higher event
23 window in an event study looking at a common stock
24 prices other than the McKinley article cited in
25 footnote 115 on page 39 of your reply report?

1 A. I think I just mentioned those. All of
2 those would have been -- the corporate bond area is
3 not as -- it hasn't been as researched as much so
4 the issues associated with offerings, issues
5 associated with the different types of information,
6 there have been -- I mean, again, there's --
7 there's -- there's a number of articles. I can't,
8 not offhand. It has been a long time since I read
9 those articles because there has really been a
10 noncontroversial issue.

11 Understand what I'm really saying is
12 that on June 16, there's a corrective disclosure.
13 The price goes down within minutes. And over the
14 weekend, there are -- there's basically a cushioning
15 blow with the company issuing -- finally issuing
16 something that there's a misstatement. There is the
17 announcement in the filing of Corvex's 13D. There
18 is a filing the next day of a lawsuit and also a
19 number of analysts' reports.

20 What I'm saying is that the 19th, you
21 take it independently, is -- again, and I'm talking
22 stock because that's what you asked me about, stock,
23 is certainly economically interesting, given, as
24 Mr. Deal says, that there's weak statistical
25 significance, and therefore, you have to look at it

1 and just because it's not at the 95 percent
2 statistical significance level as opposed to the
3 94 percent statistical significance level doesn't
4 mean you immediately say there is no price impact.
5 You have to evaluate, was it cushioned in some way,
6 and therefore, even he has not offered evidence of a
7 lack of price impact from the disclosures on
8 June 19.

9 Q. Let's talk about June 19 for just a
10 second. I'll circle back to something I asked
11 earlier but asked it in slightly different way.

12 What did shareholders know at the end
13 of the day on June 19 about CenturyLink's alleged
14 conduct that they didn't know at the end of the
15 trading day on June 16?

16 A. What did investors -- I'm not reading the
17 minds of investors. I haven't been asked to read
18 the minds of investors.

19 Q. That's funny. You did earlier in your
20 report actually. But setting that aside -- set
21 aside what investors learned, what disclosures were
22 made about CenturyLink's conduct on June 19 that
23 were in any way different from the disclosures made
24 on June 16?

25 A. Well, I'll take you to the Complaint,

1 Paragraph 158. The news worsened for CenturyLink
2 investors. On Monday, June 19, 2017, at 9:30 a.m.,
3 Bloomberg reported that a consumer class action
4 lawsuit arising out of CenturyLink's billing misconduct
5 had been filed in California the night before. The
6 article explained that the lawsuit detailed how
7 Ms. Heiser's allegations of what she observed and
8 what CenturyLink's corporate culture encouraged were
9 consistent with the experience of hundreds of
10 thousands and potentially millions of consumers who
11 had been defrauded by CenturyLink.

12 So that -- and I can continue, but
13 that at least is what the Complaint alleges.

14 Q. Yeah, I have read the Complaint. What
15 part of what you just read to me reflects new
16 information about CenturyLink's conduct, not about
17 the fact that someone else had filed a lawsuit but
18 about CenturyLink's conduct?

19 A. Well, it's the case that, you know, that
20 this -- the Heiser allegations were consistent with
21 the experience of hundreds of thousands, potentially
22 millions of consumers.

23 Q. You don't think that's what Heiser was
24 alleging in the first instance?

25 A. I have no opinion on what Heiser was

1 alleging other than the fact that she disclosed
2 information related to the allegations of financial
3 misconduct.

4 Q. If you don't have a view about what
5 Heiser had alleged, then how do you know that what
6 you just read to me reflects new information about
7 CenturyLink's conduct?

8 MR. BLATCHLEY: Objection, misstates
9 testimony.

10 BY THE WITNESS:

11 A. Again, I'm not sure -- I've stated
12 countless times and been criticized by Mr. Deal that
13 I assume that will be demonstrated that it will be
14 new information. It just seems to me on its face it
15 is new information.

16 If I tell you today that there is
17 somebody who suggests that there's a lack of
18 controls within a corporation and then additional
19 information comes out that cites that there are
20 potentially hundreds of thousands of consumers who
21 have been defrauded, that's additional information.
22 And as an economist, what I do is I look first at
23 the statistics, then I go to the analysts, then I go
24 to the company and internal documents, and you know,
25 but I'm not here to determine whether this is true

1 or not true, nor am I here to do hypotheticals where
2 I assume zero liability.

3 Q. Yeah, you only do hypotheticals assuming
4 100 percent liability, right?

5 A. As an economist, expert economist, my
6 analysis has to assume -- if I assume zero
7 liability, I'll tell you what the damages are. I
8 mean -- yeah. And as I said, the I'll call it
9 incredible component to my common damages
10 methodology is that I can -- the common damages
11 methodology is applicable and is applied class-wide
12 whether liability is 100 percent or zero percent.

13 Q. So you have cited the allegations in the
14 consumer class action about hundreds of thousands
15 and potentially millions of customers as potentially
16 new information about CenturyLink's conduct. So let
17 me ask you, you recall that Heidi Heiser accused the
18 company of running what she called a Wells
19 Fargo-like scheme. Do you recall that?

20 A. I recall hearing about it, reading about
21 it but...

22 Q. And from an economic perspective, can you
23 articulate for me the difference between a Wells
24 Fargo-like scheme in that context and something that
25 affected hundreds of thousands and maybe millions of

1 customers?

2 A. I have not considered that issue. In
3 fact, I wasn't asked to distinguish between Heidi
4 Heiser's revelations and these revelations.

5 Q. Let me go back to the two-day event
6 window. In Paragraph 85 of your report, you
7 identify five reasons why you believe this event
8 window is appropriate in this case. Is there any
9 academic literature or other specific support for
10 these factors supporting the use of a longer than
11 one day event window?

12 A. Yes. In fact, I wrote and had a
13 published article on corporate bonds that
14 discussed -- discussed these.

15 I mean, this is not -- this is just
16 not again controversial that it's going to take
17 longer, depending on -- actually, there's even
18 research that shows about liquidity at different
19 times of the day so you can talk about times of the
20 day, but that also if we're using close to close
21 affects it, and then the issue of how different
22 types of news get interpreted, there's academic
23 literature on that. I mean, and as I said, earnings
24 released announcements are the focus of most finance
25 but there's other, and then whether it's

1 quantifiable, you know, and unanticipated, whether
2 it's from a third party or whether the securities
3 are again a corporate bond or a stock.

4 Q. Can you cite me to any academic
5 literature that supports these specific five factors
6 as a reason to use an event window of longer than a
7 day for corporate stock?

8 A. Again, as I sit here today, I told you
9 Patel even talks about how overnight there is
10 something. Why don't we look and see what Mr. Deal
11 cited for his opinion and maybe there's --
12 there's --

13 Q. Was there a -- you just referenced a name
14 that we talked about overnight, was that a name,
15 Patel?

16 A. Patel, yes. I referenced it ten minutes
17 ago in this line.

18 Q. Yeah, I know. I'm just trying to make
19 sure we have it down. I heard Patel. Can you
20 elaborate? Patel, who is Patel? What his first
21 name, what publication are you talking about?

22 A. Again, I have a 40-year history in
23 finance. I began my career in finance in 1978. Do
24 I remember every article and textbook that I have
25 read? No. I just said he's got a co-author as

1 well. It is a well-known, Mr. Deal should know it,
2 or certainly the people in Analysis Group, where you
3 get a very quick response; and again, these are -- I
4 believe it's earnings responses only that they're
5 looking at so that's going to be quicker than
6 others, but there's also a discussion about how
7 these responses happen overnight.

8 But again, I -- I -- this is -- this
9 is somewhat common. I am -- like I say, you could
10 go to Mr. Deal who comes up with his opinion and --

11 Q. Any other specific studies or articles
12 you can cite me to?

13 A. I'm trying to think. I can't remember.
14 I mean, so much of it -- so much of it is sort of in
15 my past especially because an article that talks
16 about information disclosure is not sort of the
17 nouveau area in academic finance. It's more
18 associated with the types of finance that my son
19 studies at University of Chicago.

20 Q. When you look at these five factors and
21 you decide that an event window of more than a day
22 is warranted, is there some limiting principle that
23 tells you to go just to the end of the next day or
24 might we just as well go a whole another day? Why
25 not go through June 20?

1 A. Well, interestingly enough, I have been
2 involved now in almost a dozen Canadian suits and
3 there, they have determined that they want to look
4 at ten-day windows, you know, in terms of the
5 response of stocks to information. There's no hard
6 and fast rule. You got to look at each disclosure
7 on its own.

8 I see studies, and I've seen in the
9 courts of five days. I -- I -- and you can look at
10 up Dynex I believe it is. It is cited I believe on
11 my CV, where I think it took 37 days for the
12 security to react. Again, it depends on the market,
13 it depends on the nature of the information. You
14 can look at it and, in fact, you could look at
15 multi-day returns and, you know, it might take some
16 time to do it, but close to close, which is, again,
17 I'll agree that that's generally what you look at,
18 but, you know, first of all, that's done and the
19 academic research is based on using thousands of
20 companies. Okay. This is a single firm event study
21 and, therefore, you have got to -- you know, that's
22 what you're looking for is expertise and experience
23 and knowledge that people like myself have and there
24 are times where multi-day windows make -- are
25 correct.

1 Q. Is there any particular framework or
2 standard that one would apply to decide, for
3 example, here, that at the end of the day on June 19
4 is the right place to stop your event window?

5 A. You mean that a two-hour window is the
6 appropriate window?

7 Q. No. I meant -- so you decided the right
8 window was until the end of the day on June 19,
9 correct? That's your view, right?

10 A. Oh, the June -- yeah, the June 19 window
11 was because the announcement took place at 9:30 a.m.
12 on June 19. That's the beginning of the trading
13 day.

14 Q. So what standard did you apply to decide
15 that the end of the day on June 19 was the right
16 place to stop instead of going on to the 20th or the
17 30th for that matter?

18 A. Well, I think I did go on to the 20th
19 with respect to the corporate bonds.

20 Q. I'm asking about the stock now.

21 A. Oh, you are asking about the stock?

22 I probably showed the results and the
23 trier of fact could determine for this a specific
24 unique company. I mean, again, we're talking about
25 a single firm event study interpreting information.

1 I'm here to provide the trier of fact with
2 information. If they believe that that a two-hour
3 window is the appropriate window, then that's for
4 them to decide, but if they see, you know, the type
5 of information that has been disclosed, if they see
6 that it came from a third party, if they see -- it's
7 not like analysts immediately ran out other than
8 CFRA to say, my God, this is a problem, don't buy
9 this stock. It took, you know, what, three days
10 before a number of the analysts responded to this.

11 And you know, if the trier of fact
12 decides that's not appropriate, at the damages
13 stage, I will deal with it. But I don't think -- it
14 doesn't affect my opinion about the efficiency of
15 the market, it doesn't affect my opinion associated
16 with the common damages methodology, and it
17 certainly doesn't affect my opinion that it's a
18 demonstration that there's a lack of price -- that
19 Mr. Deal has demonstrated that there's a lack of
20 price impact.

21 Q. Is there any reason why you didn't go
22 beyond a single day in looking at the July 12
23 disclosures?

24 A. I can.

25 Q. But you didn't. I'm asking whether

1 there's any principled reason why you did that or
2 did you just do that because that maximized the
3 potential damages?

4 MR. BLATCHLEY: Objection to the form of
5 the question.

6 BY THE WITNESS:

7 A. That's -- that's sort of silly because
8 I'm not doing a damages analysis. What I showed was
9 that there was a statistically significant movement.
10 If I were asked by Mr. Blatchley to do damages,
11 possibly I would go beyond that, if I could
12 demonstrate good reason for that, and, in fact, I
13 think the courts at least look at 90-day bounce
14 back. As I said, the Canadian courts look at an
15 average over the ten days following a corrective
16 disclosure and, you know, our courts have generally
17 looked at multi-day returns, but I don't see how
18 that has anything to do with maximizing damages
19 because I haven't done a damages report or loss
20 causation report. It might be that there's
21 substantially less when we cover damages than the
22 decline that we observed on July 12, 2017.

23 Again, Mr. Deal never did anything to
24 demonstrate that there was a lack of price impact on
25 that day, nor did he do anything to demonstrate that

1 that, you know, that a common -- that it would be --
2 affect the common damages methodology and nor does
3 he disagree that the market is sufficient.

4 Q. Let me ask you about something you
5 mentioned a couple of times now. You referenced the
6 filing of a 13D by a shareholder who purchased some
7 additional stock I believe on the 19th of June,
8 2017. Are you familiar with what I'm referring to?

9 A. I don't think that's the -- I don't think
10 that's the -- are you referring to Paragraph 81 in
11 my report?

12 Q. Let me check.

13 Yes. I apologize. I misspoke. It
14 was after the close of market on the 16th.

15 A. Correct. There was a filing and it is
16 cited in footnote 108, a scheduled 13D filed at
17 2017-06-16 at 17:02:49, yes.

18 Q. Okay. And then just prior to that, you
19 mentioned an Oppenheimer analyst commenting on the
20 allegations. Do you have that in front of you?

21 A. Paragraph 80?

22 Q. Yes.

23 A. Let me read that again.

24 Q. I'm sorry. I'm sorry. Paragraph 17. I
25 apologize. I'm looking at the June 19, 2017, report

1 that referenced the possibility that this might be a
2 strong buying opportunity. Do you see that?

3 A. I'm confused. What's 17?

4 Q. Let me start over. On page 34 of your
5 report, Paragraph 79 --

6 A. 34.

7 Q. It carries over.

8 A. Oh, there, okay, second --

9 MR. BLATCHLEY: 79?

10 MR. GIBBS: Yeah, Paragraph 79.

11 BY MR. GIBBS:

12 Q. Are you with me now?

13 A. Okay. Paragraph 79. Okay.

14 Q. So you see the analyst reporting the drop
15 in the price of CenturyLink's stock and suggesting
16 that it might provide a strong buying opportunity,
17 correct?

18 A. I do.

19 Q. Okay. In your view, is it consistent
20 with the analysts believing that Heidi Heiser's
21 allegations revealed a year's long fraud on the
22 company's customers and its shareholders for the
23 analyst to suggest that this is a time to buy more
24 CenturyLink stock?

25 A. Well, first of all, the question is

1 ambiguous because you used the plural of analysts.
2 This is one analyst who considers it a buying
3 opportunity.

4 Q. And is that consistent in your view with
5 that analyst believing that Heidi Heiser's
6 allegations have revealed a year's long fraud by the
7 company on its customers and its shareholders?

8 A. It's consistent with, you know, a
9 revelation on July 12 of greater because, in fact,
10 there are a number of analysts who talk about it.

11 Again, this is one person's view.
12 Exactly what his view is and what his incentives are
13 for that view, I don't know, but if you took this by
14 itself, this might indicate that this analyst
15 believes there's a buying opportunity. I don't know
16 whether he's looking at, you know, a 50 cent
17 opportunity or a dollar opportunity. I don't think
18 he changed his price target or anything of that
19 nature, but that's his view and he's allowed to have
20 to have his view.

21 Q. In your experience both as a --

22 A. Let me -- can I add one --

23 Q. Go ahead.

24 A. -- one other component, though. If that
25 view, especially since he has a number of customers,

1 to the extent that he's overly optimistic might
2 induce some type of cushioning effect to what we
3 observe on June 19 because he's come out with a --
4 sort of a stable buying opportunity.

5 Q. In your experience, as both the public
6 company executive and as an economist, does a
7 reasonable investor view the revelation of a year's
8 long fraud by management on the company, both on its
9 customers and on its shareholders, as a buying
10 opportunity?

11 MR. BLATCHLEY: Objection.

12 BY THE WITNESS:

13 A. For that particular analyst? Sorry.
14 Michael what?

15 MR. BLATCHLEY: Objection to the form of
16 the question.

17 BY THE WITNESS:

18 A. Again, analysts are there. They're
19 sometimes right, sometimes wrong. What I find I
20 think most interesting, and it's in -- it really
21 comes from Mr. Deal's report, is that a substantial
22 number of analysts over this whole period changed
23 their estimates, especially for EBITDA, and they
24 also -- you know, one of the stronger analyst
25 analysts, Morningstar, reduced its fair value by an

1 amount that's very close to the total amount of the
2 decline over all three days. This is one -- this is
3 one analyst. This is one analyst.

4 I mean, the other issue is that if I
5 were to take this as Mr. Deal might have, whether
6 that says it's a strong buying opportunity, it
7 certainly is evidence of price impact from the
8 disclosure and certainly at minimum is evidence that
9 there's not a lack of price impact from that
10 disclosure. I mean, they even talked about it right
11 here, a 4.6 drop amid accusations of Wells
12 Fargo-scheme provides a strong buying opportunity.
13 Well, that would suggest that at least this analyst
14 believed that there was price impact from the
15 accusations.

16 Q. Yeah, you understand we're not talking
17 about a price impact from the alleged corrective
18 disclosures. We're talking about whether there's a
19 price impact from the alleged false statements or
20 omissions. You understand that at least, don't you?

21 MR. BLATCHLEY: Objection to the form of
22 the question.

23 BY THE WITNESS:

24 A. Yeah, we're not talking about corrective
25 disclosures -- alleged corrective disclosures, we're

1 talking about alleged misrepresentations and
2 omissions?

3 Q. And to the extent we are talking about
4 price impact at the class certification stage, is it
5 your understanding that we're talking about whether
6 there was a price impact from the alleged corrective
7 disclosures? Is that really your understanding?

8 A. My understanding is that that there is
9 back-end and there's front-end, and that back-end
10 alone can demonstrate what the Supreme Court
11 suggests is price impact, but that's for you guys to
12 discuss with the judge as to what is price impact.
13 You think this is only on the front-end, only on the
14 front-end?

15 Q. You understand how depositions work,
16 right? I ask questions and you answer them. Do you
17 understand that?

18 A. Yes.

19 MR. BLATCHLEY: Objection.

20 BY MR. GIBBS:

21 Q. And is there some circumstance where you
22 understand that the witness's role in a deposition
23 is to ask the lawyer a question and demand an
24 answer?

25 A. I was just asking a clarification.

1 Q. I think any reasonable reader or watcher
2 or listener would understand that that's not
3 remotely what you just did. But we'll move on.

4 So my question to you earlier
5 actually had nothing to do with the analyst. I
6 asked you whether in your experience as a public
7 company executive and as an economist, do you
8 believe that a reasonable investor would typically
9 view the disclosure of a year's long fraud on
10 management and the company on both its customers and
11 its shareholders as a good reason to buy more stock
12 in the company?

13 MR. BLATCHLEY: Objection to the form of
14 the question and the characterization of the
15 testimony.

16 BY THE WITNESS:

17 A. Yeah, it depends what other information
18 is out, what the signal to the market is. It
19 depends whether the analysts -- I don't know
20 whether -- you know, we have had all types of issues
21 associated with analysts, their incentives and their
22 conflicts. I mean, that's too general a question.
23 And this is one analyst out of a number. I can't
24 generalize from the views of one analyst, and this
25 is also one sentence from the report, and I can't

1 remember the rest of the report.

2 Q. Do you personally invest in individual
3 stocks?

4 A. Mostly not. I did -- I'll give a little
5 shout out here. I got in the IPO of Peloton, which
6 opened at 27, even through the pandemic. The other
7 day, I was up at 48. So I have paid for -- I have
8 two Peloton bikes and my \$40 per month subscription.

9 So, yes, I'll sometimes buy
10 individual stocks, but the substantial proportion of
11 my assets, both my fixed income assets as well as my
12 equity, are managed by professional managers because
13 today I'm looking at a computer screen with
14 Mr. Gibbs' face on it. I don't want to have to be
15 looking at a screen with stocks on it, and the only
16 way to do any reasonable investing on individual
17 stocks is to have somebody who does spend their day
18 looking at a computer screen.

19 Q. If you were to find out that, and not
20 that this would ever happen because I'm a big fan of
21 the company, but if you were to find out
22 hypothetically that Peloton had engaged in a year's
23 long scheme to defraud its customers and its
24 investors, would you immediately think I think I'll
25 go buy more of that stock?

1 MR. BLATCHLEY: Objection to the
2 hypothetical.

3 BY THE WITNESS:

4 A. Again, I would have to look at the
5 circumstances. Right now, given the pandemic, we're
6 talking about a price movement of all of maybe a
7 dollar 50 in CenturyLink. At Peloton -- if that
8 came out and Peloton went down, given how they're
9 going to come out of the -- you should be paying me
10 for this advice, but the fact is I think they're
11 going to come out of this pandemic unbelievable so I
12 still might consider there to be a strong buying
13 opportunity for Peloton, even if I found out there
14 was a problem.

15 Part of it would depend -- I mean,
16 you know, Oppenheimer called the management. You
17 know, I don't have that access to John Foley, the
18 founder, but needless to say, I'm not sure how that
19 relates to this particular case, but you asked me if
20 I would do individual investing and there's one.

21 Q. If you were to hear that someone had
22 filed a lawsuit accusing Peloton of engaging in a
23 year's long fraud on its customers and on its
24 investors, would you necessarily assume that that
25 accusation was true?

1 MR. BLATCHLEY: Objection to the form of
2 the question.

3 BY THE WITNESS:

4 A. Yeah, I can't answer that.

5 Q. You can't say yes, I would assume it's
6 true, or no, I wouldn't assume it's true?

7 A. You have given me a one sentence. No, I
8 can't. I have to understand what context, you know,
9 what has been alleged, what the past behavior is.
10 You know, I'd probably look and see and try and get
11 a sense because it went public I think within the
12 last year. So there are a whole bunch of factors
13 that I would look at before I would make that
14 investment decision but...

15 Q. I wasn't asking about investment. I was
16 asking about whether you would assume that the
17 agencies in the Complaint were true.

18 A. Would I assume the allegations were true?

19 Q. Yeah.

20 A. I don't know. Again, that's a
21 hypothetical.

22 MR. BLATCHLEY: Just one second.
23 Objection, asked and answered.

24 MR. GIBBS: I actually think he expressly
25 refused to answer, but okay. Okay.

1 BY MR. GIBBS:

2 Q. Back to Patel -- I just want to make sure
3 I'm clear on this on the record. You referenced an
4 article by Patel, you gave us some information about
5 what it's about so we can hopefully go find it. But
6 it wasn't clear to me though whether you relied on
7 Patel's article or any other articles that are not
8 cited in your report in forming the opinions that
9 are reflected in your report?

10 MR. BLATCHLEY: Objection.

11 BY THE WITNESS:

12 A. Well, I guess I relied on the articles
13 that are in Appendix B. The fact of the matter is,
14 and depending on how you defined "relied," I relied
15 on my class that Eugene Fama taught me and I relied
16 on my options pricing class that Ross taught me and
17 Scholls taught me. I don't cite to them here
18 because that's part of the -- that's part of the
19 foundations of finance. And it's, you know, if I
20 cited to every article, textbook that I have that
21 has been part of my -- you know, part of my
22 knowledge base over the last 40 years, it would be
23 bigger than this mound of paper.

24 So I cite to an article. It's an
25 academic article. It's a multi-day article. I have

1 utilized multi-day returns as have experts
2 throughout this industry because of commonly
3 accepted multi-day windows in litigation. Multi-day
4 windows in litigation are often, there again, I will
5 say it again, because we're talking about single
6 firm event studies. Single firm event studies have
7 idiosyncrasies that you don't get with academic
8 research.

9 MR. GIBBS: All right. So, I'm told that
10 we past the three-hour mark. I have a couple of
11 closeout questions. I will say for the record that
12 although I'm going to live up to my agreement and
13 stop asking questions because we're past the
14 three-hour mark, I'm going to reserve our rights on
15 that. I think the witness has chewed up enormous
16 amounts of my time deliberately not responding to
17 various questions, filibustering for pages and pages
18 and pages in response to questions that should have
19 been yes or no. So we're going to reserve on that,
20 but I just have a couple of very quick follow-up
21 questions and then we will yield for the time being.

22 MR. BLATCHLEY: If I could just respond
23 to that. Obviously, we object to that
24 characterization and, you know, Dr. Hartzmark has
25 been as appropriate as one could be as an expert

1 witness and I would say something different for the
2 questioning but we'll allow this extra time for the
3 time being so we can wrap this up.

4 MR. GIBBS: The record will speak for
5 itself, and the court may very well take up that
6 issue.

7 BY MR. GIBBS:

8 Q. Mr. Hartzmark, my question for you is
9 have you been in communication with lead counsel
10 during the course of today's deposition --

11 A. Yes.

12 MR. BLATCHLEY: Yeah, objection, just
13 warning on any work product concerns.

14 BY MR. GIBBS:

15 Q. And now I want to distinguish between
16 time when we have been on the record and time when
17 we have been off the record. Is that distinction
18 clear to you, Mr. Hartzmark?

19 A. Yes.

20 Q. For the time when we have been on the
21 record during today's deposition, have you been in
22 contact in any way with lead counsel for plaintiffs
23 in this matter?

24 A. No, other than his picture being in my
25 zoom video.

1 Q. Okay. So while we've been on the record
2 here today, have you received any text messages,
3 emails, or other written communication from
4 plaintiff's counsel while we have been on the
5 record?

6 A. I have not even checked any emails or
7 text messages since we've been on the record so my
8 answer is that I have no knowledge of any emails,
9 text messages, or anything from counsel while we
10 were on the record.

11 MR. GIBBS: All right. Subject to the
12 reservation of rights I alluded to earlier, I'm done
13 for the day.

14 MR. BLATCHLEY: So, Patrick, I just
15 wanted to ask, you had mentioned the -- because I
16 don't want it to be an issue at all -- the dates
17 concerning what was in I think Paragraph 112. I
18 wanted to provide you the opportunity, I think we
19 can get that those for you. I just didn't want that
20 to be a concern, if there's any questions that you
21 wanted to ask about that.

22 MR. GIBBS: Oh, you can get them for me
23 now?

24 MR. BLATCHLEY: That was the question.

25 MR. GIBBS: Yeah. I mean, I asked about

1 them several hours ago. I would love to see them.
2 If you have them and you can send them to me and you
3 want to hold on and find out whether I have
4 questions about them, I'm happy to do that. I don't
5 want to get in a pissing match over timing, but,
6 yeah, if you have them right here at hand and can
7 hold on for ten minutes while I confer with my team
8 and decide whether there's anything we want to ask
9 about that, that will be fine. It's up to you.

10 MR. BLATCHLEY: Why don't we break and
11 we'll come back in five minutes. It is just matter
12 of making sure I can get them to you.

13 MR. GIBBS: All right.

14 THE VIDEOGRAPHER: The time is 3:18 p.m.
15 and we are off the record. The deposition will
16 continue.

17 (Whereupon, a break in the
18 proceedings was taken.)

19 THE VIDEOGRAPHER: The time is 4:06 p.m.
20 Central time, and we are on the record.

21 MR. GIBBS: During the break, plaintiff's
22 counsel emailed to us a document. I'm trying to
23 find the file name -- the document that plaintiff's
24 counsel emailed to us is a PDF file entitled
25 HARTZMARK-PARA 112 Table Backup, and as I understand

1 it, the witness has this document in front of him.
2 The document has been sent to the court reporter and
3 we have asked for this document to be marked as
4 Exhibit 33.

5 (Deposition Exhibit 33 was
6 marked for identification.)

7 BY MR. GIBBS:

8 Q. Mr. Hartzmark, do you have this
9 HARTZMARK-PARA 112 table backup document in front of
10 you?

11 A. It was sent to my wife so I don't know if
12 that's the name, but I have this document, which is
13 a table, that's basically the export of Mr. Deal's I
14 believe it's Figure 5.

15 MR. BLATCHLEY: Just to make it easier, I
16 can represent that my colleague Michael Mathai sent
17 the same document that you sent or that he sent you
18 to Dr. Hartzmark and that's the document he's
19 looking at.

20 MR. GIBBS: Okay. With the understanding
21 that the document the witness is looking at is the
22 same document I'm looking at and the same document
23 that's being marked as Exhibit 32, I do have some
24 questions about this.

25

1 BY MR. GIBBS:

2 Q. Mr. Hartzmark, did this table exist
3 before the break that we just came back from or did
4 you create it during the break?

5 A. I did not create this table, except in
6 its original form when I was writing the report. As
7 I said, I literally exported Figure 5 and did some
8 checks and then sent it to my staff, who then had
9 had it checked. As I mentioned, my computer is
10 sitting in front of me, and this is -- I have not
11 seen the backup before and this is the first time I
12 have seen this table.

13 Q. Well --

14 A. I mean, I would have seen it back when I
15 wrote the report, but first time today that I'm
16 seeing this table.

17 Q. Okay. So we have looked at the table and
18 as best we can tell from the table, there are 26
19 dates that fall into the categories listed in
20 your -- in your Paragraph 112, and so the backup
21 would suggest that the number of dates on which you
22 would not expect a significant stock price return is
23 26, not 27, and the number of dates on which you
24 would or could reasonably expect a stock price
25 return is also 26. Are we reading that correctly?

1 A. Again, I just -- yes.

2 Q. And so in those portions of your reply
3 report where you reference 25 dates on which you
4 could reasonably expect a stock price reaction and
5 27 dates on which you would not expect a stock price
6 reaction, would -- sorry, the paper ruffling is
7 coming through on the microphone -- for those
8 references, given this backup, should I understand
9 that the report should read 26 dates on which you
10 would not expect a stock price reaction and 26 dates
11 on which you could reasonably expect one?

12 A. To the extent this is correct, and I have
13 not spoken with or gone over this with my staff, if
14 this is the correct and then we didn't do any output
15 or production because it wasn't requested for this
16 deposition, if this is the correct table, then I
17 would check. The only changes would be -- what --
18 this is paragraph -- oh, I'm sorry. I'm looking at
19 Mr. Deal's report.

20 Yeah, if we go back to this section,
21 there would be no changes in Paragraph 105, 106,
22 108, 109, it looks like 110, other than more than I
23 guess would be stricken in 110 because I have
24 identified so it's 26. And in 112 it would be
25 included at least 26 dates or 50 percent of the 52

1 date sample would be changed.

2 I don't know where -- I can go
3 through if you want me to. I don't know where the
4 error is, but it certainly going from 27 to 26 and
5 52 percent to 50 percent and the basis for this was
6 only an illustrative table, it does not change my
7 opinions that the stock and the bond traded in
8 efficient markets, it doesn't change my opinion that
9 there's common damages methodology that can be
10 applied class-wide nor does it change my opinion
11 that Mr. Deal failed to provide any evidence of an
12 absence of price impact.

13 Q. All right. But just sitting here today,
14 you don't know whether the report and table are
15 correct or alternatively the table backup that's
16 just been produced to us and marked as Exhibit 33 is
17 correct?

18 A. Well, I can say based on this table --
19 first of all, the report other than this edit to my
20 knowledge as I sit here today is correct. This has
21 no influence on the -- on any of the opinions. Deal
22 Figure 5 and if I want me to, I can go through --

23 Q. No, I don't. I definitely don't.

24 A. Okay -- if you are concerned about the
25 dates. But this is of no impact. You can see, all

1 I did, as I stated on the record, I exported
2 Mr. Deal's table, or Figure 5, and I had initially
3 checked off, I sent it to my staff, and my staff
4 must have made an error. Simple as that.

5 Q. That's fine. I don't want to spend
6 everyone's time walking through each of the dates
7 and asking you to redo the work. I'm simply trying
8 to figure out whether we know which of the two sets
9 of numbers is correct, and the reason I'm asking is
10 because although I understand that it doesn't change
11 your opinion, I have got a bunch of questions and
12 answers now on the record that assume that the
13 correct numbers are 25 and 27. I now have backup
14 for the table that got us to 25 and 27, and it says
15 26 and 26. And so I don't know whether my record
16 now is completely garbled with the wrong numbers.

17 If you don't know right now whether
18 the backup is correct or the report and the table
19 are correct on this issue, that's fine, we will move
20 on. I just wanted to know whether you know.

21 A. I would have to rely on my staff. In
22 terms of a garbled transcript, if you substitute 26
23 for 27 and 26 for 25, the transcript should be
24 clear. I can't imagine that any of the questions or
25 answers that I gave to the questions would be

1 affected based on that. Especially because, again,
2 this was the front-end discussion, and all this was
3 meant to do was to illustrate the point about Mr.
4 Deal's report where he stated there were
5 quote/unquote, only four dates, and I put that in
6 perspective, and, in fact, as it relates to that
7 relative measure that I had in paragraphs -- the
8 paragraph where I talk about the random --
9 Paragraph 115, it would still be about one day. The
10 difference is, what, about 1.2 versus 1.3 days. So
11 this is not important.

12 And as I said before, in terms of
13 garbled discussion, 1 to 20 of those dates include
14 10-Ks and 10-Qs. So again...

15 Q. Are you finished with that answer?

16 A. Sure.

17 Q. A couple of follow-up questions on the
18 table in Paragraph 112 of your report. Just to make
19 sure I understand that. Now that I think we need to
20 do a little bit of unpacking on our side. So I just
21 want to make sure I understand your categories.

22 You have five categories of allegedly
23 false and misleading disclosures that, in your view,
24 would not reasonably be expected to lead to a change
25 in the stock price and those categories are laid out

1 in the chart in Paragraph 112 of your report,
2 correct?

3 A. Yeah. These are as described in
4 Paragraph 110. You would not necessarily expect to
5 observe statistically significant returns. The
6 largest category associated with this issue is the
7 10-Ks and 10-Q filings which follow -- followed the
8 earnings disclosures and the proxy statements which,
9 you know, generally don't have material information.
10 And then there are the reports to a business press
11 or, I'm sorry, reports that may be a media report
12 that it's, you know, like on the local television
13 news, it wasn't important for the business press to
14 pick up so it's really not disseminated, or Mr. Deal
15 included in his sample of 52 dates some dates that
16 were specified in the Complaint where there were
17 documents, you know, say maybe filed I guess after
18 the fact or nonpublic.

19 I don't recall specifically but you
20 can replicate this and to the extent that you think
21 it impacts any of the testimony, you and the
22 attorneys can decide what to do.

23 Q. So all I really wanted was a yes or no
24 answer to my question, whether these are the five
25 categories. But what I want to do now is get a bit

1 more insight into the last two, which you labeled no
2 dissemination of media reports to business press and
3 nonpublic document filed by the company.

4 So just first off, can you help me
5 understand what nonpublic document filed by the
6 company is?

7 A. Nonpublic. Sure. Just give me a second.

8 I'm going through the appendix, which
9 is the alleged false and misleading statements, and
10 it appears that Mr. Deal has added -- I'm sorry,
11 added some false and misleading statements to
12 Appendix A of the Complaint. So I can't find them
13 right there. I'm trying to look.

14 Does anybody have a searchable file
15 where April 2016, April 6 or 7, 2016 shows up or
16 could be searched? Because that will give an
17 example of what I'm talking about. Again, I wrote
18 this a little while ago so I don't remember offhand,
19 and my staff would have done most of the work, but I
20 know I did some of it.

21 MR. BLATCHLEY: If I might,
22 Dr. Hartzmark, it might just be easiest to refer to
23 the exhibit, 33.

24 THE WITNESS: Exhibit 33.

25 MR. BLATCHLEY: The new document that we

1 just marked.

2 THE WITNESS: Right. Correct. But he
3 asked a question, he wanted some description of what
4 a nonpublic document filed by the company is.

5 MR. BLATCHLEY: Yes.

6 THE WITNESS: And I am -- you're
7 saying...

8 MR. BLATCHLEY: That that just might aid
9 what I think Mr. Gibbs is asking about.

10 THE WITNESS: Okay. Paragraph 111.
11 Third party disclosure that might not be immediately
12 widely disseminated. Oh, okay. I guess, yeah,
13 something like the AG consent order. So you
14 wouldn't expect there to be a -- oh, here it is.

15 Here is the Complaint, Paragraph 133,
16 page 63, "In the face of the Attorney General's
17 findings, CenturyLink quietly agreed to a settlement
18 in which it promised to take a number of measures
19 intended to prevent consumers from being misled and
20 improperly charged. Specifically on April 6, 2016,
21 CenturyLink entered into an assurance of
22 discontinuance with the Arizona Attorney General in
23 which the company (falsely) denied any wrongdoing
24 where it expressly denied each and every one of
25 Arizona Attorney General's allegations. Indeed, in

1 the assurance of discontinuance, CenturyLink claimed
2 that all terms material and qualifying conditions,
3 termination fees, availability of the high speed
4 internet speeds, modem router, purchase
5 requirements, and installation fees were fully
6 disclosed."

7 So not only -- I don't believe that
8 this is claimed as a misrepresentation or an
9 omission so it would appear that Dr. Deal's Figure
10 5, which is labeled -- has added dates, and in that
11 particular date, there is -- it even says here, it
12 sort of quietly -- and I believe my staff looked,
13 and there was no simultaneous filing. I don't even
14 think it went out on the AG's site.

15 Needless to say, this is not
16 necessarily -- I don't even think there was any
17 public disclosure of this, and it's also not listed
18 in appendix -- oh, here's Figure 5 again -- overview
19 of 52 alleged inflationary dates, and he calls it
20 two categories of alleged misstatements and I don't
21 think the Complaint -- and I never realized this
22 before that his Figure 5 is wrong, but I don't think
23 the Complaint characterizes that as an alleged
24 misstatement. So I think he's overstated the 52
25 dates.

1 But needless to say, something that's
2 not publicly disclosed by the company, you wouldn't
3 expect there to be a statistically significant or
4 inflationary response of the market.

5 BY MR. GIBBS:

6 Q. So I understand that point, but it would
7 also be the case, wouldn't it, that if it wasn't
8 publicly disseminated, it wouldn't support a claim
9 for fraud on the market either, would it?

10 MR. BLATCHLEY: Objection.

11 BY THE WITNESS:

12 A. If it's -- if it's not publicly
13 disseminated, it would not -- no, just the opposite.
14 Just the opposite.

15 So that particular -- that particular
16 disclosure on April 13th, 2017 -- Wait. No. It's
17 2016. That particular disclosure that is improperly
18 included in Mr. Deal's exhibit suggests that there
19 would be an inflation -- it's an overview of 52
20 alleged inflationary dates, which is wrong,
21 statistically significant positive and negative
22 abnormal price changes are boldfaced.

23 So he's -- he's suggesting that on
24 April 7 there should be a statistically significant
25 return. I'm saying no, you wouldn't expect it

1 because it wasn't a public document, and lo and
2 behold, there is zero for that date. So that is
3 consistent and supportive of the market being
4 efficient and for there to be fraud on the market.

5 Q. Why do you think that Mr. Deal improperly
6 included this April 6 assurance of discontinuance in
7 his list of alleged inflation dates? Why do you
8 think it is improper?

9 MR. BLATCHLEY: Objection.

10 THE WITNESS: Why do I think it's
11 improper?

12 MR. BLATCHLEY: Objection to form.

13 BY MR. GIBBS:

14 Q. Yeah. You just said Mr. Deal improperly
15 included that in his list of 52 alleged inflation
16 dates. You said it with a great deal of contempt in
17 your voice. I would like to know why you think it
18 is improper for him to include that?

19 A. I don't understand the contempt...

20 MR. BLATCHLEY: Objection to the form.

21 I would just -- I just want to say,
22 we've been going now for 20 minutes. You said there
23 would be 10 minutes of questioning. I'd like this
24 deposition that was supposed to be three hours to
25 end in short order, but I'd refer the witness to the

1 Complaint and the report.

2 MR. GIBBS: You know, Michael, while he's
3 reviewing those materials, let me just say that the
4 witness gave me a series of lengthy and
5 sanctimonious lectures about the information in
6 Paragraph 112 of his report and about the backup for
7 it. It took me 30 minutes to get a straight answer
8 to the question of whether there is anywhere a list
9 of those dates. We finally got a list of those
10 dates at the very end of my questioning and it turns
11 out that either the report or the list is wrong.
12 And I'm going to explore this for as long as it
13 takes. If you want it shut down, jump off the
14 phone, go for it. I'll take it up with the court.
15 I'm entitled to understand what's going on.

16 Now, the witness has rather
17 sneeringly said that Mr. Deal improperly included
18 this date and this disclosure on his list of
19 allegedly false and misleading statements. I'd like
20 to understand the basis for that testimony.

21 BY THE WITNESS:

22 A. The basis for that comment is Appendix --
23 is the Complaint which I have in front of me,
24 pages -- and I'm going from the top, pages 157 of
25 165 through -- through 146 of 165. Wait. I've got

1 it backwards. I'm sorry. Pages -- it's 146 of 165,
2 this is Appendix A to the Complaint.

3 False and misleading statements
4 concerning revenue results. Okay. And it was my
5 understanding that this was the basis of Mr. Deal's
6 Figure 5. Yet I now see that at least as it relates
7 to April 7, 2016, that he has put in another date
8 and another representation that is not in this, and
9 therefore, I'm saying that if he's suggesting, and
10 maybe that's -- I don't know how -- you know, maybe
11 he needs to be redeposed, but I don't know why that
12 date, and now I'm seeing there are other dates, are
13 included in his Figure 5. I took his Figure 5 to be
14 the dates where there were, as he calls it,
15 categories of alleged misstatements. I assumed
16 those were dates of misstatements, so...

17 Q. But you now believe that -- you now
18 believe that April 6 is not a date of an alleged
19 misstatement and that's why you said he improperly
20 included it in his chart; is that right?

21 A. Well, because it's not in Appendix A.

22 Q. Let's look at the Complaint, please,
23 that's marked as Exhibit 1. And let's start,
24 please, on page 90 of the Complaint. Let me know
25 when you have that in front of you, please.

1 A. Okay.

2 Q. You see the heading there, Roman numeral
3 VIII, Defendant's False and Misleading Statement.
4 Do you see that?

5 A. I do.

6 Q. And in Paragraph 190 of the Complaint,
7 the plaintiffs alleged that during the class period
8 defendants made false or misleading statements about
9 a number of subjects, and they're numbered 1 through
10 5.

11 Do you see that?

12 A. Yes.

13 Q. Okay. And then I want you to roll
14 forward to page 113 of the Complaint with subheading
15 C.

16 A. I'm sorry. I took it apart. I need to
17 put it back together again. 113C.

18 Q. All right. And that subheading says,
19 quote, "Materially false and misleading statements
20 and omissions concerning CenturyLink's purported
21 business integrity, legal compliance, and honesty in
22 sales practices."

23 Do you see that?

24 A. Yes.

25 Q. Okay. Now, I would like to ask you to

1 roll forward to page 118, Paragraph 247 of the
2 Complaint.

3 A. Okay.

4 Q. Are you there?

5 A. I am.

6 Q. And Paragraph 247 as well as
7 Paragraph 248, 250, 251, et cetera, is describing
8 precisely the April 6 assurance of discontinuance
9 that we were just talking about as one of the
10 alleged false statements made by the defendants
11 during the class period, correct?

12 A. I don't see it's saying that there's a
13 statement. It says as discussed above on April 6,
14 2016, CenturyLink entered into a publicly-filed
15 assurance of discontinuance.

16 Q. Go ahead and continue. So Paragraphs 247
17 through 254 is listing a series of statements
18 attributed to CenturyLink and alleged by the
19 plaintiffs to be materially false or misleading, and
20 if you have any question about that, I would refer
21 you to Paragraph 255, which says CenturyLink's
22 statements set forth above in Paragraphs 247 through
23 54 were materially false and misleading.

24 Do you see that?

25 A. It also states, and again, on page 113,

1 and maybe its omissions, I don't know, but I see --
2 yes, I see that.

3 Q. Okay. So is it still your position that
4 CenturyLink's statements in the assurance of
5 discontinuance are not alleged in the Complaint to
6 be among the allegedly false and misleading
7 statements by CenturyLink?

8 A. Again, they're not in Appendix A, and
9 maybe they're false and misleading. Again, it
10 doesn't affect my opinion whether you include those
11 dates or exclude those dates.

12 Q. That's fine. But you -- let me circle
13 back though.

14 As I understand what you have told me
15 about this category of statements, meaning in
16 Paragraph 112 of your reply report, this April 6,
17 2016, assurance of discontinuance, you concluded
18 that that document was not likely to have affected
19 the company's stock price because it wasn't
20 disseminated broadly enough to affect the stock
21 price; is that correct?

22 MR. BLATCHLEY: Objection to the form of
23 the question.

24 BY THE WITNESS:

25 A. I labeled it -- April 6 -- nonpublic

1 document filed by company. I don't -- that's all I
2 know with respect to this. I believe, for example,
3 that one -- when one went to Bloomberg, Factiva, or
4 the other business media, there was no mention of
5 this. And now just I would be speculating, it's
6 been too long, as to whether this was even disclosed
7 on this specific date, which I don't know. So --
8 but again, whether it's in Figure 5, out of Figure
9 5, it is -- it is -- it doesn't affect my opinion,
10 this one date.

11 Q. If the April 6, 2016, assurance of
12 discontinuance was not disseminated broadly enough
13 to have had an impact on CenturyLink's stock price,
14 could that statement or series of statements
15 logically support a claim of securities fraud under
16 a fraud on the market theory?

17 MR. BLATCHLEY: Objection to form.

18 BY THE WITNESS:

19 A. I can't answer that question. That's a
20 legal question.

21 Q. Okay. But the statements that you have
22 put in the category in Paragraph 112 to your reply
23 report, nonpublic document filed by company, the
24 reason you put those --

25 A. The two of the -- I'm sorry --

1 Q. Two dates, yeah, they're statements on
2 two dates that you put into the bucket you labeled
3 nonpublic documents filed by company, correct?

4 A. Correct.

5 Q. And the reason you put those statements
6 into that bucket is because you assessed those to be
7 statements that were not circulated broadly enough
8 to expect them to affect the company's stock price,
9 correct?

10 MR. BLATCHLEY: Objection.

11 BY THE WITNESS:

12 A. I'm not aware -- again, this is one
13 issue, and I can't remember whether it was even
14 disseminated at all, or whether it was -- I just
15 don't remember.

16 Q. Tell me in your own words why you listed
17 the two dates listed under nonpublic document filed
18 by the company, and this is a list of dates where
19 you think one would not reasonably expect the price
20 of the company's stock to be impacted by the
21 statements, I would like you to tell me in your own
22 words why are those statements in that bucket?

23 A. To the extent that a document is not -- a
24 nonpublic document is not disseminated, it shouldn't
25 have any impact on price in an efficient market.

1 Q. Okay. Now, same questions about the
2 bucket immediately above that, no dissemination of
3 media report to business press. First question is
4 how is that different from the bucket below it?

5 A. Well, I believe what that is is wherein
6 there was some disclosure, again, like a local TV
7 show where they interview a person and that's it. I
8 mean, again, Bloomberg doesn't have anything,
9 Factiva doesn't have anything, the business media
10 does not have any record of disseminating that,
11 again, localized interview.

12 I can again go through the Complaint
13 and try and find those, but that's -- that's -- that
14 is my -- that I believe is what that category means.

15 MR. GIBBS: Okay. That's all I have for
16 now.

17 E X A M I N A T I O N

18 BY MR. BLATCHLEY:

19 Q. Dr. Hartzmark, I'd like to ask you just a
20 couple of questions concerning what Mr. Gibbs just
21 asked you about.

22 I'd like you to go through the
23 Complaint and look at the Table of Contents.

24 A. I'm there.

25 Q. You will see on page little Roman numeral

1 iii of the Complaint, the section that says Roman
2 numeral VIII in the Table of Contents, it says
3 Defendants False and Misleading Statements, and it
4 refers --

5 A. I can't -- Roman numeral iii?

6 Q. Sorry. That's the page number at the
7 bottom of the page.

8 A. Oh, okay. Yes.

9 Q. And the Table of Contents, Roman numeral
10 VIII is saying Defendants False and Misleading
11 Statements.

12 A. Yes, I see that.

13 Q. And that starts at page 90 according to
14 the Table of Contents?

15 A. Yes.

16 Q. And you will see below that there's a
17 subheading that says Materially False and Misleading
18 Statements Or Omissions Concerning CenturyLink's
19 Business Strategies and Financial Performance?

20 A. Yes.

21 Q. And that starts on page 91 and goes
22 through page 100 under the Table of Contents?

23 A. It goes through -- yes, the Table of
24 Contents through 100.

25 Q. So I'm taking you through there. So

1 there is subsection B, False and Misleading
2 Statements Covering Up Defendant's Secret Attempt to
3 Address the Company's Cramming Prices, and there's a
4 subheading there?

5 A. Yes.

6 Q. And you see subsection C, Materially
7 False and Misleading Statements Or Omissions
8 Concerning CenturyLink's Purported Business
9 Integrity, Legal Compliance, and Honesty in Sales
10 Practices?

11 A. Yes.

12 Q. And then there's subsection D, Materially
13 False and Misleading Statements and Omissions
14 Concerning CenturyLink's Regulatory Regs, that's on
15 page 120?

16 A. Yes.

17 Q. And then subsection E, False and
18 Misleading Statements and Omissions of CenturyLink's
19 SEC Filings, page 122, correct?

20 A. Oops. Yes.

21 Q. And so you would agree with me that these
22 Table of Contents reflect that the false and
23 misleading statements alleged by plaintiffs include
24 all those statements between pages 90 and 122 in the
25 Complaint, correct?

1 MR. GIBBS: Objection, leading. He's
2 your witness. You don't get to lead him.

3 BY THE WITNESS:

4 A. Correct.

5 Q. Okay. So now I'd like to direct your
6 attention to the first section Mr. Gibbs referred
7 you to as well, and that's Paragraph 190.

8 A. Paragraph 190, page 90, with the heading,
9 Defendant's False Or Misleading Statements, yes.

10 Q. You agree that that paragraph in
11 Paragraph 190 lists the false and misleading
12 misstatements and omissions alleged by plaintiffs in
13 this case?

14 MR. GIBBS: Objection, leading.

15 BY THE WITNESS:

16 A. Yeah, it lists the categories of the
17 misleading statements and omissions.

18 Q. Okay. I'd like you to direct your
19 attention to Paragraph 201 under the heading False
20 and Misleading Statements Concerning CenturyLink's
21 Purported Revenue.

22 A. Paragraph 201 on page 95?

23 Q. Correct. It's under the heading False
24 and Misleading Statements Concerning CenturyLink's
25 Purported Revenues.

1 Do you see that?

2 A. Yes.

3 Q. And you would agree with me that just as
4 we discussed in the Table of Contents that these are
5 the false and misleading statements concerning
6 purported revenues alleged by plaintiffs, correct?

7 MR. GIBBS: Objection, leading.

8 BY THE WITNESS:

9 A. Yes. Yes. This is the false and
10 misleading statements concerning CenturyLink's
11 purported revenues, yes.

12 Q. So Paragraph 202 of this section
13 concerning revenues, the last sentence of that
14 paragraph, I'd like you to read that.

15 A. "The false and misleading statements
16 concerning the company's reported revenues and the
17 representations described in the reasons driving
18 them and the company's financial performance are set
19 forth in the chart attached hereto as Appendix A.

20 Q. Okay. And then the following paragraph
21 describes why those statements in Appendix A
22 concerning the company's reported revenues were
23 false; is that right?

24 MR. GIBBS: Objection, leading.

25

1 BY THE WITNESS:

2 A. The paragraph below it suggests -- it
3 doesn't suggest. It states that the statements in
4 Appendix A were materially false and misleading
5 because they omitted the material fact that the
6 company's revenue and financial performance was due
7 at least in part to the undisclosed illegal cramming
8 practices alleged herein, specifically these
9 representations created false impression of the
10 company's financial performance resulted from the
11 pursuit of legitimate business strategies and the
12 purported demand for CenturyLink's services and,
13 therefore, revenues stability was achievable in the
14 near term when in reality the company's results
15 depended upon and were materially impacted by the
16 company's undisclosed cramming practices. And
17 there's more, but I'll stop there.

18 Q. So I'm correct in understanding that
19 Appendix A represents the statements referred to in
20 this paragraph concerning revenues and financial
21 performance; is that right?

22 MR. GIBBS: Objection, leading.

23 BY THE WITNESS:

24 A. That's correct.

25 Q. Okay. And it does not -- Appendix A is

1 not described in any other part of the Complaint; is
2 that right?

3 MR. GIBBS: Objection, leading.

4 BY THE WITNESS:

5 A. As I sit here today, that's my
6 understanding.

7 Q. And it is your understanding is also that
8 if we go to the next category of misstatement, in
9 subheading 3, false and misleading statements
10 concerning CenturyLink's bundling strategies -- let
11 me withdraw that.

12 Go to section B, and there's
13 paragraph, the paragraph -- sorry -- subheading B
14 which is on page 102.

15 A. 102 is the false and misleading
16 statements covering up defendants secret attempt to
17 address the company's cramming crisis.

18 Q. Right. Correct. That's Paragraph 213
19 through 218 at least in that subsection, correct?

20 A. Correct.

21 Q. And you don't see any reference to
22 Appendix B or, sorry, Appendix A in this section of
23 the Complaint, correct?

24 MR. GIBBS: Objection, leading.

25

1 BY THE WITNESS:

2 A. No, I do not see any reference to
3 Appendix A.

4 Q. So am I correct in stating that Appendix
5 A referred to revenue misstatement and not the
6 statements set forth in this subsection?

7 MR. GIBBS: Objection, leading.

8 BY THE WITNESS:

9 A. That is correct. It appears.

10 Q. Okay. I would ask the same questions
11 with the other categories of misstatements alleged
12 in the Complaint?

13 A. So there's section C, page 113, I see no
14 reference to Appendix A, and section C, section D,
15 materially false and misleading statements and
16 omissions concerning CenturyLink's regulatory risks.
17 And then, again, I don't see anything referencing
18 Appendix A in that section either.

19 Q. Right. So I'm correct to state that
20 there's false and misleading statements alleged in
21 the Complaint in the sections we just discussed on
22 pages 90 to 122 and those are at issue in this case,
23 correct?

24 MR. GIBBS: Objection, leading.

25

1 BY THE WITNESS:

2 A. That's my understanding.

3 I just got a notice, I only have
4 10 percent battery on my headphones. But if you
5 should leave me, I'll move on to speakerphone. But
6 yes. Yes.

7 Q. Okay. So can I direct your attention to
8 paragraph 247, and I'll represent to you again just
9 so we all orient everyone, this is under the
10 section: Truly False and Misleading Statements and
11 Omissions Concerning CenturyLink's Purported
12 Business Integrity, Legal Compliance, and Honesty in
13 Sales Practices. That's under the section and that
14 is where paragraph --

15 A. 247.

16 Q. -- 247 begins, correct?

17 MR. GIBBS: Objection, leading.

18 BY THE WITNESS:

19 A. Correct. 247 discusses the April 6
20 entering into an assurance of discontinuance.

21 Q. Correct. That was referred to in your
22 earlier discussion with Mr. Gibbs, correct?

23 MR. GIBBS: Objection, leading.

24 BY MR. BLATCHLEY:

25 Q. -- and the Appendix A that we have

1 discussed earlier, correct?

2 MR. GIBBS: Objection, leading.

3 BY THE WITNESS:

4 A. Correct.

5 Q. That's so am I correct that again this is
6 a statement that that issue in the case is allegedly
7 false and misleading by plaintiffs?

8 MR. GIBBS: Objection, leading.

9 BY THE WITNESS:

10 A. It appears to be.

11 Q. I would ask you to read for the record
12 the beginning of Paragraph 247, which says "as
13 discussed above," I'd like you to read that into the
14 record.

15 A. "As discussed above, on April 6, 2016,
16 CenturyLink entered into a publicly-filed assurance
17 of discontinuance with the Arizona Attorney General.
18 In the assurance of discontinuance, the Arizona
19 Attorney General explained each alleged violation of
20 the Arizona Consumer Law it believed CenturyLink
21 engaged in and for each allegation CenturyLink
22 expressly denied the allegation. In fact, not only
23 did CenturyLink deny the Attorney General's
24 allegations in providing incomplete information, the
25 company affirmatively stated that it fully disclosed

1 all such information to consumers."

2 Q. So I would just ask you, again, referring
3 to the first sentence of this paragraph, this
4 assurance of discontinuance, am I correct in
5 understanding it's a publicly-filed document?

6 MR. GIBBS: Objection, leading.

7 BY THE WITNESS:

8 A. It is actually entered into a
9 publicly-filed assurance of discontinuance. But it
10 also indicates a denial, which would offset any I
11 guess -- you would have a positive and a negative
12 impact at that.

13 When you have a moment, I'm going to
14 need a break. Sorry.

15 MR. BLATCHLEY: Sorry. Let me just
16 finish and we'll take a break.

17 BY MR. BLATCHLEY:

18 Q. You see in paragraphs -- in
19 Paragraphs 249 and 248, CenturyLink is denying that
20 it engaged in any misconduct, is that a correct way
21 of reading that paragraph?

22 MR. GIBBS: Objection, leading. The
23 document speaks for itself. Is he leaving?

24 MR. BLATCHLEY: Dr. Hartzmark?

25 Dr. Hartzmark, do you need to take a

1 break while we fix this issue?

2 THE VIDEOGRAPHER: Gentlemen, would you
3 like to go off the record while he fixes it?

4 MR. BLATCHLEY: Yes. Patrick, do you
5 mind, let's take five minutes so we can get this
6 technical issue sorted out.

7 THE VIDEOGRAPHER: The time is 4:56 p.m.
8 Central time, and we are off the record.

9 (Whereupon, a break in the
10 proceedings was taken.)

11 THE VIDEOGRAPHER: The time is 5:03 p.m.
12 Central time, and we are on the record.

13 BY MR. BLATCHLEY:

14 Q. So Mr. Hartzmark, we were discussing the
15 statements alleged by the plaintiffs as false and
16 misleading in the section under subsection C,
17 materially false and misleading statements and
18 omissions concerning CenturyLink's purported
19 business integrity, legal compliance, and honesty in
20 sales practices, am I right about that?

21 A. Yes. That was on page 113, and I believe
22 we had gone to 247.

23 Q. And in Paragraph 247, it discusses the
24 statements contained and the paragraphs that follow
25 contained in the assurance of discontinuance that

1 CenturyLink entered into with the Arizona State
2 Attorney General; is that right?

3 MR. GIBBS: Objection, leading.

4 MR. BLATCHLEY: I'm just trying to orient
5 the witness.

6 BY THE WITNESS:

7 A. Yes. I said yes.

8 Q. Sorry. I didn't hear. And again those
9 statements were contained in a publicly-filed
10 document; is that right?

11 A. It appears --

12 MR. GIBBS: Objection, leading.

13 BY THE WITNESS:

14 A. -- to be a publicly-filed document
15 according to the Complaint, yes.

16 Q. And if you go to Paragraph 255, can you
17 read that paragraph, the first sentence -- first two
18 sentences into the record for me?

19 A. Sure. Paragraph 255 says: "That
20 CenturyLink's statements set forth above in
21 Paragraphs 247, 254 were materially false and
22 misleading. CenturyLink was not, quote, committed
23 to customer service, end quote: It, in fact,
24 employed a policy and practice of routinely engaging
25 in misleading and deceptive practices which harmed

1 its consumers by, among other things, charging them
2 for services and products they did not request,
3 misquoting prices at the point of sale, and other
4 similarly deceptive conduct as set forth above in
5 Section 4."

6 That's sentence one. And then second
7 sentence: "Moreover, CenturyLink's, quote,
8 expressed denials, end quote, of each of these
9 allegations set forth in the Arizona assurance of
10 discontinuance were false because as is set forth
11 more fully above in Section 4, CenturyLink engaged
12 in the alleged activities."

13 Q. I'm correct in stating that these
14 publicly-filed statements in the assurance of
15 discontinuance are alleged as false and misleading
16 because they did not disclose the truth about
17 CenturyLink's actual practices; is that an accurate
18 characterization?

19 A. Yes.

20 MR. GIBBS: Objection, leading.

21 BY MR. BLATCHLEY:

22 Q. And if -- I want you to imagine a
23 hypothetical. If the assurance of discontinuance
24 said something different such as CenturyLink
25 admitted to engaging in the conduct set forth by the

1 Arizona Attorney General and admitted to violating
2 state, federal, and local law, and you know,
3 admitted that it's policies, practices, or
4 procedures failed to meet the applicable standard,
5 what would that statement -- would that statement be
6 expected to do -- to have a different price reaction
7 based on that statement?

8 MR. GIBBS: Objection, lack of
9 foundation, calls for speculation.

10 BY THE WITNESS:

11 A. That would be negative news. So I would
12 expect that all else constant, the price would
13 decline.

14 Q. And here the statements contained in the
15 publicly-filed assurance of discontinuance, I'm
16 again right in stating they denied allegations of
17 misconduct as set forth in the Arizona Attorney
18 General; is that right?

19 MR. GIBBS: Objection, leading.

20 BY THE WITNESS:

21 A. Yes.

22 Q. Dr. Hartzmark, you had mentioned that
23 this publicly-filed document was not picked up by
24 the other business press. Is that an accurate way
25 of stating your prior testimony?

1 A. That's my I'll call it vague
2 recollection, that it was not timely disseminated to
3 the business press. I don't know if it was delayed
4 or just not disseminated.

5 Q. And it is true this was a publicly-filed
6 document which would be considered by investors,
7 correct?

8 MR. GIBBS: Objection, asked and
9 answered, and leading.

10 BY THE WITNESS:

11 A. Yes. I mean, it's not a document, as we
12 have discussed in great detail, can be disclosed by
13 a third party, in this case the Arizona Attorney
14 General. I'm not sure which part was
15 publicly-filed, whether it was Attorney General
16 publicly filing something or whether CenturyLink
17 issued an AK, I just don't recollect.

18 Q. And in going back to our -- in going back
19 to our discussion, again this is a hypothetical,
20 supposing that CenturyLink did admit to state and
21 federal violations of law and did admit that it was
22 engaged in the misconduct, would you expect that the
23 dissemination and impact on price might be
24 different?

25 MR. GIBBS: Objection, lack of

1 foundation, calls for speculation.

2 BY THE WITNESS:

3 A. Well, given the corrective disclosures
4 and the fact that those were widely disseminated and
5 digested, it would suggest that if this happened
6 with Arizona, it would be as well, and we also know
7 that the Attorney General lawsuit was widely
8 disseminated -- Attorney General of Minnesota
9 lawsuit.

10 Q. And there was a significant price
11 reaction when the Minnesota Attorney General lawsuit
12 was disclosed alleging the violations of the state
13 law; is that an accurate statement?

14 A. Yes.

15 Q. And regardless of whether this particular
16 set of misstatements are included in Mr. Deal's
17 analysis in Figure 5, what impact does that have on
18 your opinions concerning price impact in this case?

19 A. It has no impact.

20 MR. BLATCHLEY: That's all I have for
21 now.

22 MR. GIBBS: All right. I have some
23 follow-up questions.

E X A M I N A T I O N

BY MR. GIBBS:

Q. So, Mr. Hartzmark, Mr. Blatchley just led you through a series of questions designed to get you to say that the April 6, 2016, assurance of discontinuance was publicly-filed, and you complied with that. But let me just make clear. Do you know one way or the other whether the assurance of discontinuance was or was not publicly-filed or are you simply accepting the allegation in the Complaint at face value?

A. I think I stated the answer in his question, but I wasn't sure whether it was publicly-filed by the State of Arizona or whether it was an AK issued by the department. I don't recollect at this point.

Q. Do you have any idea whether anybody publicly filed it as you sit here today?

MR. BLATCHLEY: Objection, asked and answered.

BY THE WITNESS:

A. Sitting here today, yeah, I don't -- I have no recollection of this particular detail.

Q. Okay. But then as we discussed, in Paragraph 112 of your reply report, and having

1 referred to the backup for this table, I believe you
2 told me that you and/or your staff put this April 6,
3 2016, assurance of discontinuance into the bucket of
4 nonpublic documents filed by company and you
5 considered that a document that you would not expect
6 to have affected the company's stock price because
7 it wasn't disseminated broadly enough. Was that
8 another error by your staff?

9 A. You know, it says here it is filed by the
10 company so that answers the question. It was
11 publicly-filed by the company, but I don't know --

12 Q. It says nonpublic document filed by the
13 company. What does that even mean?

14 A. My understanding of a nonpublic document
15 filed by the company is this -- this assurance of
16 discontinuance -- I -- that possibly was -- possibly
17 was earlier. I -- I don't recollect at this point.
18 I just don't recollect.

19 Q. Okay. And then Mr. Blatchley offered you
20 a hypothetical where in -- whereby the assurance of
21 discontinuance in his hypothetical included a series
22 of admissions by CenturyLink to having violated
23 various laws, et cetera, and despite your response
24 to a bunch of my hypotheticals, you very quickly
25 answered his hypothetical and said all else equal,

1 if they had made those admissions in this assurance
2 of discontinuance, you would expect the price of
3 CenturyLink's stock to go down, but that can't
4 possibly be true, can it, because all else equal
5 would include the fact that the news wasn't picked
6 up by anybody, right?

7 MR. BLATCHLEY: Objection to the
8 hypothetical.

9 MR. GIBBS: In other words -- you can't
10 be serious. You can't be serious, Michael.

11 BY MR. GIBBS:

12 Q. Look, so, if the content of the assurance
13 of discontinuance was as Mr. Blatchley described but
14 everything else was literally equal, meaning nobody
15 in the business press or the general purpose press
16 or anybody else picked up on it and reported it, is
17 it your testimony that the content of that assurance
18 of discontinuance, even though not picked up by the
19 business press or the general purpose press would
20 have caused CenturyLink's common stock price to
21 decline?

22 A. Again, my answer to Mr. Blatchley's
23 question was, as an economist, all else equal. In
24 terms of the activities, if the same information,
25 all else equal meaning no revenue numbers, nothing

1 of that nature came out, I would expect it to be
2 picked up by the press, expect it to be
3 disseminated, and expect there to be some reaction.

4 Q. So -- and -- and what's the expert basis
5 for your expectation that if the content were as
6 Mr. Blatchley described it, it would have been
7 disseminated differently? Are you an expert in how
8 the press covers state attorney general filings?

9 A. I can't say specifically as an expert on
10 state attorney general filings, but I have examined
11 issues associated with disclosure, dissemination,
12 and digestion of information for, you know, again
13 40 years.

14 Q. Okay. You think that qualifies you to
15 testify on an expert basis that if the content of
16 this assurance of discontinuance had been as
17 Mr. Blatchley described it, it would have been
18 picked up by the business press and it would have
19 caused the price of CenturyLink's common stock to
20 decline; is that your testimony?

21 A. I basically said, again, all else equal,
22 you would expect it to go down. I didn't say how
23 much. I didn't say statistically significant. But
24 I mean, it would -- relatively speaking, it would go
25 down.

1 Q. And let me add a little bit to the
2 hypothetical, if I may. You are aware, are you not,
3 that the assurance of discontinuance that was filed
4 on April 6, 2019, reflected a settlement between
5 CenturyLink and the Arizona Attorney General's
6 office, correct?

7 A. I believe that's in the Complaint.

8 Q. In other words, unlike the Minnesota
9 Attorney General lawsuit, which was filed as a
10 contested matter, this April 6, 2016, assurance of
11 discontinuance was reflecting the resolution of an
12 investigation by the Arizona Attorney General in a
13 settlement with CenturyLink, that's consistent with
14 your understanding?

15 A. It's consistent with my understanding. I
16 don't know when it was announced.

17 Q. Do you know what was the dollar amount of
18 the settlement between CenturyLink and the Arizona
19 Attorney General that's referenced in the assurance
20 of discontinuance?

21 A. I do not.

22 Q. If I were to add to Mr. Blatchley's
23 hypothetical the fact that the matter was settled
24 for a couple of hundred thousand dollars, a de
25 minimus amount for a company of CenturyLink's size

1 and revenue, is it still your testimony that that
2 disclosure, that settlement would have caused the
3 price of CenturyLink's stock to decline?

4 A. If it was disclosed and the -- all of the
5 underlying denials were now acceptances because that
6 was the hypothetical Mr. Blatchley gave me.

7 Q. Yeah. I'm adding to the hypothetical and
8 let me add one additional fact. The additional fact
9 is it settled for a de minimus, small six figure
10 amount, all of that money was to go to reimburse the
11 Arizona Attorney General's office for its expenses
12 in conducting the investigation, none of it was
13 going to go to reimburse any customers.

14 Go ahead and add that to
15 Mr. Blatchley's hypothetical, and tell me is it
16 still your testimony that all else equal that set of
17 disclosures would have caused CenturyLink's stock
18 price to decline?

19 MR. BLATCHLEY: Objection to the
20 hypothetical.

21 BY THE WITNESS:

22 A. You're basically saying the amount would
23 offset the admittance of all types of allegations.
24 I'm not sure it would have any impact, a hundred
25 thousand dollars.

1 Q. You just don't know either way?

2 A. I don't know.

3 MR. GIBBS: Okay. I don't think I have
4 any further questions for Mr. Hartzmark. I don't
5 know whether, Michael, you intend to do any further
6 testimony. If you do, I might have questions for
7 you, but that's really up to you.

8 MR. BLATCHLEY: I don't appreciate the
9 comment, but I think we're done for today.

10 MR. GIBBS: Our rights are reserved as to
11 the time and further questioning for all the reasons
12 I stated earlier. We're not necessarily done with
13 this, but I'm not going to ask any further questions
14 at this time.

15 MR. BLATCHLEY: Our objections to your
16 position is also on the record.

17 THE VIDEOGRAPHER: JoAnn, do you need to
18 get orders?

19 (WHEREUPON, discussion was had
20 off the record.)

21 THE VIDEOGRAPHER: The time is 5:51 p.m.
22 We are off the record and this is end of the
23 deposition of Michael Hartzmark.

24 (Witness excused at 5:51 p.m.)

25

REPORTER CERTIFICATE

I, JO ANN LOSOYA, a Certified Shorthand Reporter within and for the County of Cook and State of Illinois, do hereby certify:

That previous to the commencement of the examination of the witness, the witness was duly sworn to testify the whole truth concerning the matters herein;

That the foregoing deposition transcript was reported stenographically by me, was thereafter reduced to typewriting under my personal direction and constitutes a true record of the testimony given and the proceedings had;

That the said deposition was taken before me at the time and place specified;

That I am not a relative or employee or attorney or counsel, nor a relative or employee of such attorney or counsel for any of the parties hereto, nor interested directly or indirectly in the outcome of this action.

1 IN WITNESS WHEREOF, I do hereunto set my
2 hand this 9th day of June, 2020.

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9 JO ANN LOSOYA, CSR

10 C.S.R. No. 84-002437
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Exhibit 3

	Date	Impact Date	Revenue	Customer	Financial Results	Fluctuating Results	Business Conduct	MD&A	Event	CATEGORY
[1]	1-Mar-2013	1-Mar-2013	X						10-K	Duplicates -- 10-K and 10-Q following Earnings Announcements
[2]	10-Apr-2013	10-Apr-2013		X	X				SEC Form DEF 14A	Proxy Statements without Material Unanticipated Information
[3]	8-May-2013	9-May-2013	X						Earnings Announcement	
[4]	10-May-2013	10-May-2013	X						10-Q	Duplicates -- 10-K and 10-Q following Earnings Announcements
[5]	7-Aug-2013	8-Aug-2013	X						Earnings Announcement	
[6]	8-Aug-2013	9-Aug-2013	X						10-Q	Duplicates -- 10-K and 10-Q following Earnings Announcements
[7]	6-Nov-2013	7-Nov-2013	X						Earnings Announcement	
[8]	7-Nov-2013*	8-Nov-2013	X						10-Q	Duplicates -- 10-K and 10-Q following Earnings Announcements
[9]	10-Dec-2013	10-Dec-2013	X						Investor Conference	
[10]	12-Feb-2014	13-Feb-2014	X						Earnings Announcement	
[11]	27-Feb-2014	27-Feb-2014	X						10-K	Duplicates -- 10-K and 10-Q following Earnings Announcements
[12]	16-Apr-2014	16-Apr-2014		X	X				SEC Form DEF 14A	Proxy Statements without Material Unanticipated Information
[13]	7-May-2014	8-May-2014	X						Earnings Announcement	
[14]	8-May-2014*	9-May-2014	X						10-Q	Duplicates -- 10-K and 10-Q following Earnings Announcements
[15]	12-Jun-2014	12-Jun-2014	X						Investor Conference	
[16]	6-Aug-2014	7-Aug-2014	X						Earnings Announcement	
	7-Aug-2014	7-Aug-2014	X						10-Q	
[17]	5-Nov-2014	6-Nov-2014	X						Earnings Announcement	
[18]	6-Nov-2014	7-Nov-2014	X						10-Q	Duplicates -- 10-K and 10-Q following Earnings Announcements
[19]	11-Feb-2015	12-Feb-2015	X						Earnings Announcement	
[20]	24-Feb-2015	25-Feb-2015	X						10-K	Duplicates -- 10-K and 10-Q following Earnings Announcements
[21]	9-Mar-2015	9-Mar-2015	X	X					Investor Conference	
[22]	8-Apr-2015	8-Apr-2015		X	X				SEC Form DEF 14A	Proxy Statements without Material Unanticipated Information
[23]	5-May-2015	6-May-2015	X						Earnings Announcement	
[24]	6-May-2015	7-May-2015	X						10-Q	Duplicates -- 10-K and 10-Q following Earnings Announcements
[25]	4-Jun-2015	4-Jun-2015		X					Investor Conference	
[26]	24-Jun-2015	24-Jun-2015		X	X				Financial Analyst Day	
[27]	5-Aug-2015	6-Aug-2015	X						Earnings Announcement	
	6-Aug-2015	6-Aug-2015	X						10-Q	
[28]	12-Aug-2015	12-Aug-2015			X	X			Oppenheimer Conference	
[29]	22-Sep-2015	22-Sep-2015			X	X		X	Response Letter to the SEC	Non-Public Document Filed by Company
[30]	4-Nov-2015	5-Nov-2015	X						Earnings Announcement	
[31]	5-Nov-2015	6-Nov-2015	X						10-Q	Duplicates -- 10-K and 10-Q following Earnings Announcements
[32]	7-Dec-2015	7-Dec-2015	X						Investor Conference	
[33]	10-Feb-2016	11-Feb-2016	X						Earnings Announcement	
[34]	24-Feb-2016*	25-Feb-2016	X						10-K	Duplicates -- 10-K and 10-Q following Earnings Announcements
[35]	7-Mar-2016	7-Mar-2016		X	X				Investor Conference	
[36]	5-Apr-2016	6-Apr-2016		X	X				SEC Form DEF 14A	Proxy Statements without Material Unanticipated Information
[37]	6-Apr-2016	7-Apr-2016					X		AZ Assurance of Discontinuance	Non-Public Document Filed by Company
[38]	4-May-2016	5-May-2016	X						Earnings Announcement	
	5-May-2016	5-May-2016	X						10-Q	

[39]	3-Aug-2016	4-Aug-2016	X			Earnings Announcement	
[40]	4-Aug-2016	5-Aug-2016	X			10-Q	Duplicates -- 10-K and 10-Q following Earnings Announcements
[41]	21-Sep-2016	21-Sep-2016		X	X	Goldman Sachs Conference	
[42]	6-Oct-2016	6-Oct-2016	X		X	Statement to News Source	No Dissemination of Media Report to Business Press
[43]	18-Oct-2016	18-Oct-2016	X		X	Statement to News Source	No Dissemination of Media Report to Business Press
[44]	31-Oct-2016	31-Oct-2016	X			Earnings Announcement	
[45]	4-Nov-2016	4-Nov-2016	X			10-Q	Duplicates -- 10-K and 10-Q following Earnings Announcements
[46]	27-Jan-2017	30-Jan-2017	X		X	Statement to News Source	No Dissemination of Media Report to Business Press
[47]	1-Feb-2017	2-Feb-2017	X		X	Statement to News Source	No Dissemination of Media Report to Business Press
[48]	8-Feb-2017	9-Feb-2017	X			Earnings Announcement	
[49]	22-Feb-2017*	23-Feb-2017	X			10-K	Duplicates -- 10-K and 10-Q following Earnings Announcements
[50]	13-Apr-2017	13-Apr-2017	X	X		SEC Form DEF 14A	Proxy Statements without Material Unanticipated Information
[51]	3-May-2017	4-May-2017	X			Earnings Call	
[52]	25-May-2017	25-May-2017	X		X	Statement to News Source	No Dissemination of Media Report to Business Press

Exhibit 4

**UNITED STATES DISTRICT COURT
DISTRICT OF MINNESOTA**

IN RE: CENTURYLINK SALES
PRACTICES AND SECURITIES
LITIGATION

MDL No. 17-2795 (MJD/KMM)

Expert Report of Michael L. Hartzmark, Ph.D.

January 21, 2020

Appendix E
CenturyLink, Inc. Common Stock Data

[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]
Date	Volume	Price	Dividend	Return	Market Return	Excess Industry Return	Coefficient			Predicted Return	Abnormal Return	Root MSE	t-statistic	p-Value
							Intercept	Market	Excess Industry					
5/30/13	6,585,577	\$35.23	\$0.54	-1.11%	0.38%	-1.07%	0.00	0.83	0.55	-0.23%	-0.88%	0.01	-1.31	19.21%
5/31/13	12,839,955	\$34.15	\$0.00	-3.07%	-1.43%	-0.30%	0.00	0.83	0.57	-1.31%	-1.76%	0.01	-2.65	0.92% **
6/3/13	6,059,090	\$34.47	\$0.00	0.94%	0.60%	-0.24%	0.00	0.87	0.58	0.42%	0.52%	0.01	0.76	44.73%
6/4/13	6,115,357	\$34.76	\$0.00	0.84%	-0.55%	1.29%	0.00	0.88	0.58	0.31%	0.53%	0.01	0.78	43.75%
6/5/13	7,853,308	\$34.93	\$0.00	0.49%	-1.35%	-0.13%	0.00	0.87	0.60	-1.22%	1.71%	0.01	2.50	1.38% *
6/6/13	5,079,912	\$35.50	\$0.00	1.63%	0.86%	1.64%	0.00	0.83	0.59	1.74%	-0.10%	0.01	-0.15	88.12%
6/7/13	5,187,098	\$35.43	\$0.00	-0.20%	1.28%	-1.23%	0.00	0.83	0.57	0.41%	-0.61%	0.01	-0.88	38.25%
6/10/13	3,194,525	\$35.62	\$0.00	0.54%	-0.03%	0.89%	0.00	0.82	0.59	0.55%	-0.01%	0.01	-0.02	98.77%
6/11/13	9,925,177	\$35.49	\$0.00	-0.36%	-1.01%	0.22%	0.00	0.83	0.59	-0.67%	0.31%	0.01	0.44	65.87%
6/12/13	4,738,218	\$35.39	\$0.00	-0.28%	-0.81%	0.11%	0.00	0.82	0.60	-0.56%	0.28%	0.01	0.41	68.54%
6/13/13	3,302,196	\$35.93	\$0.00	1.53%	1.49%	0.65%	0.00	0.80	0.61	1.62%	-0.10%	0.01	-0.14	88.96%
6/14/13	4,272,929	\$36.04	\$0.00	0.31%	-0.59%	0.24%	0.00	0.79	0.61	-0.29%	0.60%	0.01	0.87	38.54%
6/17/13	3,642,002	\$35.99	\$0.00	-0.14%	0.76%	-1.12%	0.00	0.79	0.62	-0.05%	-0.09%	0.01	-0.13	89.56%
6/18/13	2,884,387	\$36.24	\$0.00	0.69%	0.78%	0.81%	0.00	0.79	0.62	1.16%	-0.47%	0.01	-0.69	49.27%
6/19/13	4,798,351	\$35.33	\$0.00	-2.51%	-1.38%	-1.76%	0.00	0.78	0.61	-2.12%	-0.40%	0.01	-0.58	56.39%
6/20/13	6,233,174	\$34.13	\$0.00	-3.40%	-2.49%	-0.55%	0.00	0.79	0.62	-2.26%	-1.13%	0.01	-1.66	9.99%
6/21/13	8,513,623	\$34.18	\$0.00	0.15%	0.27%	0.44%	0.00	0.83	0.63	0.53%	-0.39%	0.01	-0.56	57.74%
6/24/13	5,296,647	\$33.99	\$0.00	-0.56%	-1.21%	0.26%	0.00	0.83	0.63	-0.81%	0.26%	0.01	0.37	70.95%
6/25/13	5,657,303	\$34.96	\$0.00	2.85%	0.96%	1.32%	0.00	0.82	0.63	1.65%	1.20%	0.01	1.74	8.53%
6/26/13	3,820,848	\$34.85	\$0.00	-0.31%	0.98%	0.12%	0.00	0.85	0.66	0.95%	-1.27%	0.01	-1.81	7.22%
6/27/13	3,755,633	\$35.27	\$0.00	1.21%	0.63%	0.52%	0.00	0.83	0.66	0.90%	0.30%	0.01	0.43	66.67%
6/28/13	4,649,488	\$35.35	\$0.00	0.23%	-0.43%	-0.42%	0.00	0.83	0.66	-0.60%	0.82%	0.01	1.17	24.51%
7/1/13	2,583,345	\$35.15	\$0.00	-0.57%	0.55%	-0.46%	0.00	0.83	0.66	0.21%	-0.77%	0.01	-1.09	27.70%
7/2/13	4,076,082	\$35.24	\$0.00	0.26%	-0.03%	0.58%	0.00	0.83	0.67	0.40%	-0.14%	0.01	-0.20	84.05%
7/3/13	1,778,305	\$35.27	\$0.00	0.09%	0.08%	0.44%	0.00	0.83	0.67	0.40%	-0.31%	0.01	-0.44	66.01%
7/5/13	1,952,476	\$35.44	\$0.00	0.48%	1.02%	-0.17%	0.00	0.83	0.67	0.76%	-0.28%	0.01	-0.40	69.22%
7/8/13	2,876,758	\$35.35	\$0.00	-0.25%	0.56%	0.21%	0.00	0.82	0.67	0.62%	-0.88%	0.01	-1.24	21.82%
7/9/13	2,869,190	\$35.39	\$0.00	0.11%	0.72%	-0.64%	0.00	0.82	0.67	0.18%	-0.07%	0.01	-0.10	92.11%
7/10/13	3,012,272	\$35.46	\$0.00	0.20%	0.02%	-0.45%	0.00	0.82	0.67	-0.26%	0.46%	0.01	0.65	52.01%
7/11/13	2,819,280	\$36.01	\$0.00	1.55%	1.37%	0.47%	0.00	0.82	0.67	1.45%	0.10%	0.01	0.14	88.65%
7/12/13	3,255,564	\$36.24	\$0.00	0.64%	0.31%	-0.83%	0.00	0.82	0.67	-0.28%	0.92%	0.01	1.29	20.08%
7/15/13	3,642,826	\$36.24	\$0.00	0.00%	0.14%	-0.73%	0.00	0.82	0.66	-0.33%	0.33%	0.01	0.46	64.31%
7/16/13	3,790,946	\$36.27	\$0.00	0.08%	-0.37%	0.94%	0.00	0.82	0.65	0.34%	-0.26%	0.01	-0.36	72.07%
7/17/13	3,505,092	\$36.11	\$0.00	-0.44%	0.29%	0.33%	0.00	0.82	0.65	0.48%	-0.92%	0.01	-1.28	20.24%
7/18/13	4,903,620	\$35.81	\$0.00	-0.83%	0.51%	-1.20%	0.00	0.82	0.64	-0.32%	-0.51%	0.01	-0.71	47.91%
7/19/13	3,644,991	\$35.98	\$0.00	0.47%	0.16%	0.03%	0.00	0.82	0.65	0.18%	0.29%	0.01	0.41	68.58%
7/22/13	3,532,214	\$35.92	\$0.00	-0.17%	0.21%	-0.17%	0.00	0.82	0.65	0.09%	-0.26%	0.01	-0.35	72.52%
7/23/13	13,298,269	\$35.94	\$0.00	0.06%	-0.19%	0.52%	0.00	0.82	0.65	0.21%	-0.15%	0.01	-0.21	83.18%
7/24/13	2,944,325	\$35.87	\$0.00	-0.19%	-0.38%	-0.32%	0.00	0.82	0.65	-0.49%	0.29%	0.01	0.41	68.42%
7/25/13	3,214,116	\$35.83	\$0.00	-0.11%	0.26%	-0.07%	0.00	0.81	0.65	0.20%	-0.31%	0.01	-0.43	66.78%
7/26/13	2,757,887	\$36.03	\$0.00	0.56%	0.08%	0.36%	0.00	0.81	0.65	0.33%	0.23%	0.01	0.31	75.38%
7/29/13	2,519,767	\$36.15	\$0.00	0.33%	-0.37%	0.96%	0.00	0.81	0.65	0.35%	-0.02%	0.01	-0.03	97.85%
7/30/13	4,545,076	\$35.72	\$0.00	-1.19%	0.04%	-1.49%	0.00	0.83	0.64	-0.87%	-0.32%	0.01	-0.45	65.34%
7/31/13	4,625,270	\$35.85	\$0.00	0.36%	0.00%	-1.04%	0.00	0.84	0.64	-0.63%	0.99%	0.01	1.40	16.46%
8/1/13	3,251,816	\$36.32	\$0.00	1.31%	1.26%	0.23%	0.00	0.84	0.63	1.24%	0.07%	0.01	0.10	91.92%
8/2/13	3,140,465	\$36.11	\$0.00	-0.58%	0.17%	0.15%	0.00	0.84	0.63	0.27%	-0.85%	0.01	-1.20	23.32%
8/5/13	3,583,586	\$36.09	\$0.00	-0.06%	-0.14%	0.12%	0.00	0.84	0.63	-0.02%	-0.04%	0.01	-0.05	96.01%
8/6/13	3,197,999	\$36.18	\$0.00	0.25%	-0.57%	-0.03%	0.00	0.84	0.63	-0.48%	0.73%	0.01	1.02	30.77%
8/7/13	4,624,033	\$36.39	\$0.00	0.58%	-0.35%	0.17%	0.00	0.83	0.63	-0.15%	0.73%	0.01	1.03	30.56%
8/8/13	16,527,825	\$34.36	\$0.00	-5.58%	0.41%	-0.99%	0.00	0.83	0.63	-0.25%	-5.33%	0.01	-7.46	0.00% **
8/9/13	8,025,526	\$33.89	\$0.00	-1.37%	-0.34%	-0.69%	0.00	0.83	0.62	-0.70%	-0.67%	0.01	-0.98	33.06%
8/12/13	4,550,973	\$34.08	\$0.00	0.56%	-0.11%	0.45%	0.00	0.81	0.63	0.18%	0.38%	0.01	0.59	55.72%
8/13/13	4,346,033	\$33.88	\$0.00	-0.59%	0.30%	-0.86%	0.00	0.81	0.63	-0.31%	-0.27%	0.01	-0.43	66.92%
8/14/13	4,280,600	\$33.73	\$0.00	-0.44%	-0.50%	0.20%	0.00	0.82	0.63	-0.31%	-0.14%	0.01	-0.22	82.92%
8/15/13	4,304,927	\$33.47	\$0.00	-0.77%	-1.41%	0.06%	0.00	0.82	0.63	-1.15%	0.38%	0.01	0.59	55.33%
8/16/13	5,853,782	\$32.92	\$0.00	-1.64%	-0.33%	-0.75%	0.00	0.80	0.63	-0.75%	-0.89%	0.01	-1.41	16.01%
8/19/13	4,647,503	\$32.56	\$0.00	-1.09%	-0.58%	-0.37%	0.00	0.81	0.64	-0.73%	-0.36%	0.01	-0.57	56.70%
8/20/13	3,407,718	\$32.58	\$0.00	0.06%	0.39%	0.27%	0.00	0.81	0.65	0.46%	-0.40%	0.01	-0.63	52.74%
8/21/13	4,057,167	\$32.32	\$0.00	-0.80%	-0.57%	-0.76%	0.00	0.81	0.64	-0.98%	0.18%	0.01	0.29	77.18%
8/22/13	22,122,025	\$32.58	\$0.00	0.80%	0.86%	-0.23%	0.00	0.81	0.64	0.51%	0.29%	0.01	0.46	64.67%
8/23/13	15,350,867	\$33.30	\$0.00	2.21%	0.41%	1.09%	0.00	0.81	0.64	1.00%	1.21%	0.01	1.91	5.80%
8/26/13	3,356,395	\$33.14	\$0.00	-0.48%	-0.40%	-1.01%	0.00	0.82	0.66	-1.02%	0.53%	0.01	0.83	40.61%

Appendix E
CenturyLink, Inc. Common Stock Data

[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]
Date	Volume	Price	Dividend	Return	Market Return	Excess Industry Return	Coefficient			Predicted Return	Abnormal Return	Root MSE	t-statistic	p-Value
							Intercept	Market	Excess Industry					
8/27/13	3,796,417	\$32.94	\$0.00	-0.60%	-1.59%	0.91%	0.00	0.82	0.67	-0.71%	0.11%	0.01	0.18	85.97%
8/28/13	2,789,114	\$32.71	\$0.00	-0.70%	0.29%	-0.68%	0.00	0.82	0.68	-0.23%	-0.47%	0.01	-0.78	43.99%
8/29/13	4,556,286	\$33.10	\$0.00	1.19%	0.21%	1.03%	0.00	0.82	0.69	0.89%	0.31%	0.01	0.51	61.10%
8/30/13	5,665,680	\$33.12	\$0.00	0.06%	-0.31%	0.03%	0.00	0.83	0.70	-0.23%	0.29%	0.01	0.49	62.78%
9/3/13	7,474,313	\$32.91	\$0.00	-0.63%	0.42%	-2.13%	0.00	0.82	0.70	-1.14%	0.50%	0.01	0.84	40.49%
9/4/13	7,055,655	\$32.50	\$0.54	0.40%	0.83%	0.84%	0.00	0.83	0.69	1.27%	-0.87%	0.01	-1.45	14.88%
9/5/13	3,960,555	\$32.13	\$0.00	-1.14%	0.12%	-0.85%	0.00	0.82	0.68	-0.48%	-0.66%	0.01	-1.10	27.56%
9/6/13	6,892,358	\$31.90	\$0.00	-0.72%	0.02%	-0.05%	0.00	0.82	0.68	-0.03%	-0.69%	0.01	-1.14	25.51%
9/9/13	5,716,016	\$32.02	\$0.00	0.38%	1.01%	-0.44%	0.00	0.82	0.69	0.51%	-0.13%	0.01	-0.22	82.50%
9/10/13	14,418,742	\$32.62	\$0.00	1.87%	0.74%	0.60%	0.00	0.81	0.69	1.00%	0.87%	0.01	1.44	15.40%
9/11/13	3,411,141	\$32.59	\$0.00	-0.09%	0.32%	-0.16%	0.00	0.81	0.70	0.14%	-0.23%	0.01	-0.38	70.25%
9/12/13	3,685,639	\$32.38	\$0.00	-0.64%	-0.31%	1.31%	0.00	0.81	0.70	0.66%	-1.30%	0.01	-2.15	3.40% *
9/13/13	2,966,766	\$32.34	\$0.00	-0.12%	0.27%	0.01%	0.00	0.81	0.67	0.20%	-0.32%	0.01	-0.52	60.22%
9/16/13	3,519,170	\$32.27	\$0.00	-0.22%	0.57%	0.44%	0.00	0.81	0.67	0.73%	-0.94%	0.01	-1.54	12.67%
9/17/13	2,456,657	\$32.43	\$0.00	0.50%	0.42%	0.24%	0.00	0.81	0.67	0.47%	0.03%	0.01	0.05	96.25%
9/18/13	5,094,935	\$32.55	\$0.00	0.37%	1.22%	-0.38%	0.00	0.81	0.67	0.69%	-0.32%	0.01	-0.52	60.37%
9/19/13	3,666,097	\$32.71	\$0.00	0.49%	-0.17%	-0.20%	0.00	0.80	0.67	-0.31%	0.80%	0.01	1.29	20.01%
9/20/13	5,997,935	\$32.28	\$0.00	-1.31%	-0.72%	-0.87%	0.00	0.79	0.69	-1.20%	-0.12%	0.01	-0.19	84.78%
9/23/13	3,655,468	\$32.24	\$0.00	-0.12%	-0.47%	0.41%	0.00	0.79	0.69	-0.11%	-0.01%	0.01	-0.02	98.40%
9/24/13	3,905,540	\$32.17	\$0.00	-0.22%	-0.25%	-0.58%	0.00	0.80	0.69	-0.63%	0.42%	0.01	0.68	49.71%
9/25/13	3,563,460	\$32.00	\$0.00	-0.53%	-0.27%	-0.03%	0.00	0.79	0.66	-0.28%	-0.25%	0.01	-0.42	67.40%
9/26/13	2,496,826	\$32.11	\$0.00	0.34%	0.37%	0.73%	0.00	0.79	0.66	0.73%	-0.39%	0.01	-0.66	51.21%
9/27/13	3,471,455	\$31.78	\$0.00	-1.03%	-0.40%	-0.67%	0.00	0.80	0.66	-0.81%	-0.22%	0.01	-0.37	71.11%
9/30/13	5,619,988	\$31.38	\$0.00	-1.26%	-0.60%	-0.12%	0.00	0.80	0.66	-0.61%	-0.65%	0.01	-1.11	27.03%
10/1/13	5,556,554	\$31.76	\$0.00	1.21%	0.81%	0.09%	0.00	0.79	0.66	0.64%	0.57%	0.01	0.97	33.20%
10/2/13	4,283,450	\$31.61	\$0.00	-0.47%	-0.05%	-0.32%	0.00	0.80	0.66	-0.31%	-0.16%	0.01	-0.28	78.11%
10/3/13	4,214,069	\$31.19	\$0.00	-1.33%	-0.90%	0.25%	0.00	0.80	0.66	-0.61%	-0.72%	0.01	-1.21	22.90%
10/4/13	3,263,308	\$31.20	\$0.00	0.03%	0.71%	-0.26%	0.00	0.80	0.66	0.34%	-0.30%	0.01	-0.51	60.99%
10/7/13	3,576,159	\$31.41	\$0.00	0.67%	-0.85%	1.18%	0.00	0.78	0.67	0.06%	0.62%	0.01	1.04	30.04%
10/8/13	4,449,659	\$31.28	\$0.00	-0.41%	-1.20%	-0.55%	0.00	0.77	0.68	-1.37%	0.96%	0.01	1.61	11.04%
10/9/13	7,853,078	\$32.19	\$0.00	2.91%	0.07%	1.09%	0.00	0.75	0.68	0.74%	2.17%	0.01	3.62	0.04% **
10/10/13	8,815,816	\$33.34	\$0.00	3.57%	2.20%	-0.17%	0.00	0.75	0.73	1.51%	2.06%	0.01	3.28	0.14% **
10/11/13	4,051,609	\$33.22	\$0.00	-0.36%	0.63%	-0.03%	0.00	0.82	0.72	0.48%	-0.84%	0.01	-1.28	20.34%
10/14/13	4,474,771	\$32.68	\$0.00	-1.63%	0.41%	-0.86%	0.00	0.81	0.72	-0.32%	-1.30%	0.01	-1.98	4.98% *
10/15/13	3,875,693	\$32.53	\$0.00	-0.46%	-0.71%	-0.24%	0.00	0.80	0.74	-0.78%	0.32%	0.01	0.48	63.28%
10/16/13	3,559,743	\$32.92	\$0.00	1.20%	1.39%	0.81%	0.00	0.79	0.75	1.68%	-0.48%	0.01	-0.72	47.33%
10/17/13	3,572,553	\$33.25	\$0.00	1.00%	0.68%	1.50%	0.00	0.78	0.74	1.61%	-0.61%	0.01	-0.92	36.21%
10/18/13	3,695,018	\$33.01	\$0.00	-0.72%	0.66%	0.66%	0.00	0.77	0.73	0.95%	-1.67%	0.01	-2.51	1.35% *
10/21/13	3,656,342	\$32.99	\$0.00	-0.06%	0.01%	1.21%	0.00	0.76	0.71	0.81%	-0.88%	0.01	-1.28	20.33%
10/22/13	3,628,492	\$33.42	\$0.00	1.30%	0.57%	0.10%	0.00	0.76	0.69	0.45%	0.86%	0.01	1.25	21.52%
10/23/13	3,397,083	\$33.39	\$0.00	-0.09%	-0.47%	0.06%	0.00	0.78	0.69	-0.37%	0.28%	0.01	0.41	68.56%
10/24/13	3,284,482	\$33.22	\$0.00	-0.51%	0.33%	-1.18%	0.00	0.78	0.69	-0.60%	0.09%	0.01	0.13	89.30%
10/25/13	3,589,224	\$33.27	\$0.00	0.15%	0.44%	0.74%	0.00	0.77	0.69	0.81%	-0.66%	0.01	-0.95	34.30%
10/28/13	3,844,839	\$33.52	\$0.00	0.75%	0.13%	0.36%	0.00	0.78	0.70	0.31%	0.44%	0.01	0.64	52.32%
10/29/13	4,926,083	\$33.81	\$0.00	0.87%	0.56%	1.07%	0.00	0.78	0.70	1.14%	-0.28%	0.01	-0.40	68.72%
10/30/13	2,943,781	\$33.53	\$0.00	-0.83%	-0.48%	-0.16%	0.00	0.78	0.69	-0.52%	-0.30%	0.01	-0.44	65.73%
10/31/13	4,128,752	\$33.86	\$0.00	0.98%	-0.38%	0.13%	0.00	0.77	0.69	-0.25%	1.24%	0.01	1.81	7.27%
11/1/13	3,978,389	\$33.58	\$0.00	-0.83%	0.29%	-0.25%	0.00	0.76	0.71	0.00%	-0.83%	0.01	-1.21	23.03%
11/4/13	3,476,054	\$33.76	\$0.00	0.54%	0.36%	0.54%	0.00	0.77	0.71	0.62%	-0.08%	0.01	-0.12	90.51%
11/5/13	5,697,242	\$33.38	\$0.00	-1.13%	-0.27%	-1.72%	0.00	0.78	0.72	-1.49%	0.36%	0.01	0.53	60.06%
11/6/13	4,634,868	\$33.89	\$0.00	1.53%	0.48%	0.58%	0.00	0.77	0.71	0.74%	0.79%	0.01	1.15	25.40%
11/7/13	13,537,330	\$31.81	\$0.00	-6.14%	-1.30%	-0.71%	0.00	0.77	0.71	-1.54%	-4.59%	0.01	-6.65	0.00% **
11/8/13	10,077,843	\$31.33	\$0.00	-1.51%	1.34%	-0.86%	0.00	0.77	0.72	0.38%	-1.89%	0.01	-2.73	0.72% **
11/11/13	3,244,043	\$31.51	\$0.00	0.57%	0.07%	-0.40%	0.00	0.73	0.74	-0.29%	0.86%	0.01	1.21	22.93%
11/12/13	5,193,576	\$31.43	\$0.00	-0.25%	-0.23%	0.51%	0.00	0.74	0.74	0.16%	-0.41%	0.01	-0.58	56.27%
11/13/13	4,161,553	\$31.48	\$0.00	0.16%	0.84%	-0.74%	0.00	0.75	0.73	0.04%	0.12%	0.01	0.17	86.28%
11/14/13	4,252,132	\$31.84	\$0.00	1.14%	0.50%	0.08%	0.00	0.75	0.72	0.38%	0.76%	0.01	1.07	28.51%
11/15/13	3,779,806	\$32.10	\$0.00	0.82%	0.42%	0.20%	0.00	0.75	0.73	0.42%	0.40%	0.01	0.56	57.76%
11/18/13	4,607,338	\$32.19	\$0.00	0.28%	-0.36%	0.86%	0.00	0.74	0.72	0.32%	-0.04%	0.01	-0.05	96.01%
11/19/13	4,567,618	\$32.01	\$0.00	-0.56%	-0.19%	0.26%	0.00	0.75	0.71	0.01%	-0.57%	0.01	-0.81	41.76%
11/20/13	5,437,589	\$31.80	\$0.00	-0.66%	-0.36%	-0.61%	0.00	0.70	0.70	-0.69%	0.04%	0.01	0.05	95.93%
11/21/13	5,369,796	\$31.08	\$0.54	-0.57%	0.82%	-0.72%	0.00	0.70	0.70	0.05%	-0.61%	0.01	-0.90	37.04%

Appendix E
CenturyLink, Inc. Common Stock Data

[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]
Date	Volume	Price	Dividend	Return	Market Return	Excess Industry Return	Coefficient			Predicted Return	Abnormal Return	Root MSE	t-statistic	p-Value
							Intercept	Market	Excess Industry					
8/21/14	3,367,515	\$40.91	\$0.00	0.29%	0.30%	0.00%	0.00	0.48	0.56	0.29%	0.00%	0.01	0.00	99.64%
8/22/14	1,860,889	\$40.80	\$0.00	-0.27%	-0.19%	-0.24%	0.00	0.48	0.56	-0.07%	-0.20%	0.01	-0.23	82.03%
8/25/14	3,472,700	\$41.27	\$0.00	1.15%	0.48%	0.25%	0.00	0.46	0.56	0.50%	0.65%	0.01	0.76	45.08%
8/26/14	2,574,155	\$41.14	\$0.00	-0.31%	0.11%	0.02%	0.00	0.47	0.58	0.20%	-0.52%	0.01	-0.61	54.63%
8/27/14	2,306,702	\$40.76	\$0.54	0.39%	0.03%	0.56%	0.00	0.48	0.59	0.48%	-0.09%	0.01	-0.11	91.55%
8/28/14	2,738,159	\$40.86	\$0.00	0.25%	-0.16%	0.08%	0.00	0.48	0.59	0.11%	0.13%	0.01	0.16	87.50%
8/29/14	2,500,622	\$40.99	\$0.00	0.32%	0.34%	0.51%	0.00	0.47	0.58	0.61%	-0.29%	0.01	-0.35	73.06%
9/2/14	3,422,613	\$40.86	\$0.00	-0.32%	-0.05%	-0.19%	0.00	0.47	0.57	0.02%	-0.34%	0.01	-0.40	68.64%
9/3/14	2,855,259	\$41.02	\$0.00	0.39%	-0.06%	0.32%	0.00	0.47	0.58	0.30%	0.09%	0.01	0.11	91.53%
9/4/14	3,624,736	\$41.06	\$0.00	0.10%	-0.15%	-0.09%	0.00	0.45	0.58	0.03%	0.06%	0.01	0.08	93.92%
9/5/14	3,061,319	\$41.47	\$0.00	1.00%	0.51%	0.21%	0.00	0.45	0.58	0.50%	0.50%	0.01	0.59	55.32%
9/8/14	7,919,078	\$40.58	\$0.00	-2.15%	-0.29%	-0.32%	0.00	0.46	0.58	-0.16%	-1.98%	0.01	-2.37	1.95% *
9/9/14	6,052,736	\$39.99	\$0.00	-1.45%	-0.65%	-0.67%	0.00	0.46	0.59	-0.57%	-0.89%	0.01	-1.04	29.82%
9/10/14	3,905,173	\$39.69	\$0.00	-0.75%	0.37%	-0.44%	0.00	0.47	0.61	0.04%	-0.79%	0.01	-0.92	35.80%
9/11/14	5,115,581	\$40.38	\$0.00	1.74%	0.12%	0.46%	0.00	0.50	0.68	0.50%	1.24%	0.01	1.47	14.56%
9/12/14	5,540,258	\$39.54	\$0.00	-2.08%	-0.59%	-0.70%	0.00	0.50	0.70	-0.65%	-1.43%	0.01	-1.68	9.64%
9/15/14	3,200,475	\$39.64	\$0.00	0.25%	-0.07%	0.41%	0.00	0.53	0.72	0.38%	-0.13%	0.01	-0.15	88.21%
9/16/14	4,007,351	\$39.60	\$0.00	-0.10%	0.75%	0.31%	0.00	0.53	0.72	0.73%	-0.83%	0.01	-0.97	33.48%
9/17/14	4,773,923	\$40.35	\$0.00	1.89%	0.13%	0.29%	0.00	0.54	0.71	0.37%	1.52%	0.01	1.78	7.74%
9/18/14	2,372,517	\$40.52	\$0.00	0.42%	0.50%	0.38%	0.00	0.54	0.72	0.65%	-0.23%	0.01	-0.26	79.20%
9/19/14	3,482,965	\$40.75	\$0.00	0.57%	-0.05%	1.09%	0.00	0.54	0.72	0.86%	-0.30%	0.01	-0.34	73.31%
9/22/14	2,778,036	\$40.79	\$0.00	0.10%	-0.80%	0.38%	0.00	0.53	0.71	-0.05%	0.15%	0.01	0.18	86.12%
9/23/14	2,646,435	\$40.46	\$0.00	-0.81%	-0.57%	-0.21%	0.00	0.52	0.71	-0.35%	-0.46%	0.01	-0.54	59.34%
9/24/14	3,452,837	\$40.44	\$0.00	-0.05%	0.79%	-0.19%	0.00	0.53	0.72	0.37%	-0.42%	0.01	-0.49	62.54%
9/25/14	2,857,294	\$39.91	\$0.00	-1.31%	-1.62%	0.15%	0.00	0.53	0.71	-0.66%	-0.65%	0.01	-0.75	45.25%
9/26/14	2,785,176	\$40.31	\$0.00	1.00%	0.88%	-0.16%	0.00	0.58	0.71	0.46%	0.54%	0.01	0.62	53.53%
9/29/14	3,763,075	\$40.40	\$0.00	0.22%	-0.25%	0.11%	0.00	0.58	0.71	0.02%	0.21%	0.01	0.24	81.05%
9/30/14	3,303,817	\$40.89	\$0.00	1.21%	-0.27%	0.47%	0.00	0.57	0.71	0.26%	0.95%	0.01	1.10	27.22%
10/1/14	2,943,935	\$40.42	\$0.00	-1.15%	-1.32%	-0.11%	0.00	0.57	0.71	-0.74%	-0.41%	0.01	-0.48	63.55%
10/2/14	2,542,464	\$40.76	\$0.00	0.84%	0.01%	-0.12%	0.00	0.54	0.74	0.01%	0.83%	0.01	0.96	33.98%
10/3/14	2,497,727	\$41.00	\$0.00	0.59%	1.12%	0.23%	0.00	0.53	0.73	0.87%	-0.28%	0.01	-0.32	74.79%
10/6/14	3,092,155	\$40.68	\$0.00	-0.78%	-0.15%	0.58%	0.00	0.50	0.73	0.44%	-1.22%	0.01	-1.41	16.02%
10/7/14	2,993,803	\$40.08	\$0.00	-1.47%	-1.51%	0.38%	0.00	0.51	0.72	-0.41%	-1.06%	0.01	-1.22	22.53%
10/8/14	3,066,336	\$40.82	\$0.00	1.85%	1.78%	-0.04%	0.00	0.51	0.70	0.95%	0.90%	0.01	1.04	30.26%
10/9/14	3,002,769	\$39.73	\$0.00	-2.67%	-2.06%	-0.38%	0.00	0.56	0.72	-1.34%	-1.33%	0.01	-1.54	12.63%
10/10/14	3,339,596	\$39.13	\$0.00	-1.51%	-1.13%	0.15%	0.00	0.62	0.73	-0.53%	-0.98%	0.01	-1.13	26.24%
10/13/14	4,048,675	\$38.41	\$0.00	-1.84%	-1.65%	-0.08%	0.00	0.65	0.73	-1.07%	-0.77%	0.01	-0.88	37.96%
10/14/14	3,825,142	\$38.83	\$0.00	1.09%	0.16%	-0.11%	0.00	0.69	0.86	0.04%	1.05%	0.01	1.23	22.07%
10/15/14	4,023,846	\$38.61	\$0.00	-0.57%	-0.80%	0.32%	0.00	0.69	0.94	-0.22%	-0.34%	0.01	-0.41	68.46%
10/16/14	4,020,397	\$38.30	\$0.00	-0.80%	0.02%	-0.48%	0.00	0.71	0.94	-0.42%	-0.38%	0.01	-0.45	65.01%
10/17/14	3,894,947	\$38.86	\$0.00	1.46%	1.29%	0.17%	0.00	0.72	1.02	1.13%	0.33%	0.01	0.40	69.03%
10/20/14	2,033,907	\$39.28	\$0.00	1.08%	0.92%	0.13%	0.00	0.73	1.03	0.83%	0.25%	0.01	0.30	76.54%
10/21/14	2,490,502	\$39.70	\$0.00	1.07%	1.96%	-0.58%	0.00	0.74	1.03	0.88%	0.19%	0.01	0.23	82.14%
10/22/14	2,118,129	\$40.09	\$0.00	0.98%	-0.72%	-0.07%	0.00	0.74	1.03	-0.57%	1.56%	0.01	1.88	6.21%
10/23/14	2,035,652	\$39.94	\$0.00	-0.37%	1.23%	-1.93%	0.00	0.72	1.03	-1.04%	0.67%	0.01	0.79	42.84%
10/24/14	2,660,126	\$39.93	\$0.00	-0.03%	0.71%	0.38%	0.00	0.73	1.00	0.96%	-0.99%	0.01	-1.18	24.12%
10/27/14	2,150,164	\$40.40	\$0.00	1.18%	-0.15%	1.14%	0.00	0.71	0.99	1.08%	0.09%	0.01	0.11	91.05%
10/28/14	1,930,936	\$41.03	\$0.00	1.56%	1.19%	0.17%	0.00	0.71	1.00	1.09%	0.47%	0.01	0.56	57.96%
10/29/14	1,918,300	\$40.99	\$0.00	-0.10%	-0.13%	0.05%	0.00	0.72	1.00	0.03%	-0.13%	0.01	-0.16	87.67%
10/30/14	1,933,926	\$41.49	\$0.00	1.22%	0.63%	-0.18%	0.00	0.73	1.01	0.35%	0.87%	0.01	1.04	29.85%
10/31/14	3,770,735	\$41.48	\$0.00	-0.02%	1.17%	0.07%	0.00	0.73	1.01	1.01%	-1.03%	0.01	-1.24	21.90%
11/3/14	2,222,062	\$41.81	\$0.00	0.80%	-0.01%	0.16%	0.00	0.71	1.04	0.22%	0.58%	0.01	0.70	48.80%
11/4/14	1,894,544	\$41.63	\$0.00	-0.43%	-0.28%	0.04%	0.00	0.72	1.02	-0.11%	-0.33%	0.01	-0.40	69.22%
11/5/14	2,699,032	\$41.65	\$0.00	0.05%	0.60%	-0.20%	0.00	0.73	1.01	0.28%	-0.24%	0.01	-0.29	77.33%
11/6/14	8,155,493	\$39.00	\$0.00	-6.36%	0.41%	-0.79%	0.00	0.73	1.03	-0.46%	-5.90%	0.01	-7.21	0.00% **
11/7/14	6,073,176	\$39.43	\$0.00	1.10%	0.05%	0.78%	0.00	0.73	1.03	0.90%	0.20%	0.01	0.25	80.38%
11/10/14	3,590,710	\$39.84	\$0.00	1.04%	0.32%	-0.03%	0.00	0.74	1.07	0.25%	0.79%	0.01	0.96	33.75%
11/11/14	2,487,437	\$39.97	\$0.00	0.33%	0.07%	-0.15%	0.00	0.76	1.05	-0.04%	0.37%	0.01	0.45	65.19%
11/12/14	3,113,603	\$40.50	\$0.00	1.33%	-0.04%	0.77%	0.00	0.77	1.06	0.86%	0.47%	0.01	0.58	56.25%
11/13/14	2,607,747	\$40.92	\$0.00	1.04%	0.06%	0.67%	0.00	0.77	1.07	0.84%	0.20%	0.01	0.24	80.76%
11/14/14	2,203,142	\$40.79	\$0.00	-0.32%	0.04%	0.69%	0.00	0.76	1.08	0.84%	-1.16%	0.01	-1.43	15.50%
11/17/14	2,548,045	\$40.95	\$0.00	0.39%	0.08%	-0.25%	0.00	0.76	1.04	-0.14%	0.53%	0.01	0.66	51.36%

Appendix E
CenturyLink, Inc. Common Stock Data

[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]
Date	Volume	Price	Dividend	Return	Market Return	Excess Industry Return	Coefficient			Predicted Return	Abnormal Return	Root MSE	t-statistic	p-Value
							Intercept	Market	Excess Industry					
11/18/14	2,211,575	\$41.09	\$0.00	0.34%	0.53%	-0.59%	0.00	0.77	1.03	-0.13%	0.47%	0.01	0.58	56.19%
11/19/14	2,649,839	\$41.12	\$0.00	0.07%	-0.14%	-1.02%	0.00	0.77	1.03	-1.08%	1.16%	0.01	1.42	15.90%
11/20/14	2,756,297	\$40.50	\$0.54	-0.19%	0.20%	-0.52%	0.00	0.77	0.99	-0.26%	0.07%	0.01	0.08	93.36%
11/21/14	3,902,001	\$40.47	\$0.00	-0.07%	0.54%	-0.23%	0.00	0.77	1.05	0.24%	-0.32%	0.01	-0.40	69.03%
11/24/14	2,767,932	\$40.28	\$0.00	-0.47%	0.29%	-1.60%	0.00	0.77	1.06	-1.40%	0.94%	0.01	1.17	24.41%
11/25/14	4,870,020	\$39.69	\$0.00	-1.46%	-0.10%	-0.01%	0.00	0.78	1.01	0.00%	-1.46%	0.01	-1.84	6.86%
11/26/14	2,565,847	\$40.57	\$0.00	2.22%	0.30%	0.98%	0.00	0.80	1.00	1.31%	0.91%	0.01	1.14	25.81%
11/28/14	1,337,844	\$40.77	\$0.00	0.49%	-0.25%	1.06%	0.00	0.80	1.03	0.98%	-0.49%	0.01	-0.61	54.50%
12/1/14	3,648,241	\$41.10	\$0.00	0.81%	-0.68%	-0.60%	0.00	0.80	1.02	-1.07%	1.88%	0.01	2.32	2.19% *
12/2/14	4,086,908	\$40.72	\$0.00	-0.92%	0.64%	-2.25%	0.00	0.77	0.97	-1.59%	0.66%	0.01	0.81	41.97%
12/3/14	4,758,746	\$40.06	\$0.00	-1.62%	0.40%	-1.01%	0.00	0.77	0.94	-0.52%	-1.11%	0.01	-1.35	18.09%
12/4/14	3,527,638	\$40.05	\$0.00	-0.02%	-0.11%	-0.09%	0.00	0.77	0.96	-0.07%	0.05%	0.01	0.06	95.43%
12/5/14	3,106,620	\$39.68	\$0.00	-0.92%	0.17%	-0.23%	0.00	0.77	0.96	0.01%	-0.94%	0.01	-1.14	25.79%
12/8/14	2,721,614	\$39.77	\$0.00	0.23%	-0.71%	0.55%	0.00	0.77	0.96	0.08%	0.14%	0.01	0.18	86.01%
12/9/14	3,224,288	\$39.10	\$0.00	-1.68%	-0.02%	-3.19%	0.00	0.76	0.96	-2.97%	1.29%	0.01	1.57	11.95%
12/10/14	2,901,101	\$38.40	\$0.00	-1.79%	-1.63%	-0.31%	0.00	0.75	0.88	-1.39%	-0.40%	0.01	-0.48	63.04%
12/11/14	2,042,830	\$38.80	\$0.00	1.04%	0.48%	0.26%	0.00	0.77	0.88	0.72%	0.33%	0.01	0.40	68.87%
12/12/14	3,533,777	\$37.58	\$0.00	-3.14%	-1.62%	-0.70%	0.00	0.77	0.88	-1.74%	-1.40%	0.01	-1.73	8.57%
12/15/14	3,685,440	\$37.78	\$0.00	0.53%	-0.63%	0.39%	0.00	0.81	0.90	-0.04%	0.58%	0.01	0.70	48.28%
12/16/14	3,856,590	\$37.89	\$0.00	0.29%	-0.85%	0.62%	0.00	0.81	0.90	0.00%	0.29%	0.01	0.35	72.43%
12/17/14	2,894,587	\$38.69	\$0.00	2.11%	2.04%	0.48%	0.00	0.80	0.90	2.20%	-0.09%	0.01	-0.11	91.01%
12/18/14	3,127,366	\$39.48	\$0.00	2.04%	2.42%	0.22%	0.00	0.80	0.91	2.29%	-0.25%	0.01	-0.31	75.85%
12/19/14	4,133,051	\$39.70	\$0.00	0.56%	0.46%	-0.29%	0.00	0.80	0.92	0.23%	0.33%	0.01	0.42	67.87%
12/22/14	2,419,168	\$40.19	\$0.00	1.23%	0.40%	0.76%	0.00	0.80	0.92	1.15%	0.09%	0.01	0.11	91.43%
12/23/14	1,615,878	\$40.23	\$0.00	0.10%	0.18%	0.29%	0.00	0.81	0.94	0.56%	-0.46%	0.01	-0.60	55.13%
12/24/14	887,602	\$40.18	\$0.00	-0.12%	-0.01%	-0.05%	0.00	0.81	0.93	0.09%	-0.22%	0.01	-0.28	78.20%
12/26/14	1,377,826	\$40.48	\$0.00	0.75%	0.33%	0.31%	0.00	0.81	0.93	0.71%	0.04%	0.01	0.05	96.10%
12/29/14	2,047,890	\$40.53	\$0.00	0.12%	0.10%	-0.44%	0.00	0.82	0.94	-0.19%	0.32%	0.01	0.41	68.06%
12/30/14	1,870,680	\$40.09	\$0.00	-1.09%	-0.48%	0.00%	0.00	0.82	0.93	-0.26%	-0.83%	0.01	-1.08	28.12%
12/31/14	1,695,636	\$39.58	\$0.00	-1.27%	-1.03%	-0.53%	0.00	0.83	0.94	-1.21%	-0.06%	0.01	-0.08	93.95%
1/2/15	2,203,929	\$39.59	\$0.00	0.03%	-0.02%	0.58%	0.00	0.83	0.95	0.68%	-0.65%	0.01	-0.86	39.43%
1/5/15	3,036,874	\$38.75	\$0.00	-2.12%	-1.82%	0.25%	0.00	0.83	0.95	-1.14%	-0.98%	0.01	-1.29	20.13%
1/6/15	4,186,158	\$38.27	\$0.00	-1.24%	-0.89%	1.01%	0.00	0.86	0.95	0.33%	-1.57%	0.01	-2.04	4.41% *
1/7/15	3,642,759	\$38.47	\$0.00	0.52%	1.19%	-1.04%	0.00	0.88	0.92	0.21%	0.31%	0.01	0.40	68.84%
1/8/15	2,882,255	\$38.86	\$0.00	1.01%	1.79%	0.38%	0.00	0.88	0.92	2.05%	-1.04%	0.01	-1.33	18.75%
1/9/15	2,180,248	\$38.40	\$0.00	-1.18%	-0.84%	-0.05%	0.00	0.86	0.91	-0.65%	-0.53%	0.01	-0.67	50.17%
1/12/15	2,586,849	\$38.65	\$0.00	0.65%	-0.81%	1.12%	0.00	0.87	0.91	0.42%	0.23%	0.01	0.29	76.98%
1/13/15	3,282,626	\$38.60	\$0.00	-0.13%	-0.25%	0.33%	0.00	0.87	0.91	0.20%	-0.33%	0.01	-0.41	68.05%
1/14/15	2,607,390	\$38.31	\$0.00	-0.75%	-0.58%	0.00%	0.00	0.87	0.91	-0.40%	-0.35%	0.01	-0.44	65.91%
1/15/15	3,149,255	\$38.30	\$0.00	-0.03%	-0.92%	0.61%	0.00	0.87	0.92	-0.15%	0.12%	0.01	0.15	87.97%
1/16/15	4,558,435	\$38.40	\$0.00	0.26%	1.34%	0.84%	0.00	0.87	0.92	2.04%	-1.78%	0.01	-2.26	2.55% *
1/20/15	2,498,302	\$38.74	\$0.00	0.89%	0.16%	0.30%	0.00	0.84	0.90	0.49%	0.39%	0.01	0.49	62.33%
1/21/15	3,483,161	\$38.63	\$0.00	-0.28%	0.49%	-0.11%	0.00	0.85	0.71	0.39%	-0.67%	0.01	-0.96	33.90%
1/22/15	3,538,262	\$39.37	\$0.00	1.92%	1.53%	-1.67%	0.00	0.85	0.71	0.16%	1.76%	0.01	2.51	1.34% *
1/23/15	2,984,939	\$39.24	\$0.00	-0.33%	-0.55%	-0.85%	0.00	0.91	0.68	-1.03%	0.70%	0.01	0.98	32.93%
1/26/15	2,556,616	\$39.00	\$0.00	-0.61%	0.26%	-0.57%	0.00	0.90	0.67	-0.10%	-0.51%	0.01	-0.71	47.76%
1/27/15	3,018,176	\$38.79	\$0.00	-0.54%	-1.34%	-0.25%	0.00	0.90	0.67	-1.33%	0.79%	0.01	1.10	27.21%
1/28/15	2,758,673	\$38.35	\$0.00	-1.13%	-1.34%	0.36%	0.00	0.89	0.67	-0.90%	-0.23%	0.01	-0.32	74.95%
1/29/15	5,231,057	\$37.50	\$0.00	-2.22%	0.96%	-0.19%	0.00	0.89	0.66	0.78%	-3.00%	0.01	-4.19	0.01% **
1/30/15	7,269,765	\$37.17	\$0.00	-0.88%	-1.30%	0.34%	0.00	0.86	0.66	-0.87%	-0.01%	0.01	-0.02	98.63%
2/2/15	4,684,915	\$38.22	\$0.00	2.82%	1.30%	1.55%	0.00	0.84	0.67	2.14%	0.68%	0.01	0.91	36.25%
2/3/15	5,637,870	\$39.59	\$0.00	3.58%	1.45%	1.14%	0.00	0.85	0.69	2.03%	1.55%	0.01	2.08	3.97% *
2/4/15	3,856,682	\$39.41	\$0.00	-0.45%	-0.39%	0.38%	0.00	0.88	0.72	-0.05%	-0.41%	0.01	-0.54	59.23%
2/5/15	5,445,432	\$38.43	\$0.00	-2.49%	1.05%	-0.28%	0.00	0.89	0.71	0.75%	-3.24%	0.01	-4.33	0.00% **
2/6/15	3,626,682	\$38.56	\$0.00	0.34%	-0.32%	2.13%	0.00	0.85	0.73	1.27%	-0.94%	0.01	-1.16	24.71%
2/9/15	11,608,076	\$39.67	\$0.00	2.88%	-0.42%	-0.13%	0.00	0.85	0.69	-0.46%	3.34%	0.01	4.13	0.01% **
2/10/15	5,651,826	\$40.18	\$0.00	1.29%	1.07%	0.06%	0.00	0.84	0.68	0.96%	0.32%	0.01	0.38	70.82%
2/11/15	5,111,313	\$40.52	\$0.00	0.85%	0.03%	-0.26%	0.00	0.84	0.69	-0.13%	0.98%	0.01	1.13	25.96%
2/12/15	12,709,861	\$39.29	\$0.00	-3.04%	0.99%	-0.62%	0.00	0.84	0.68	0.43%	-3.46%	0.01	-3.99	0.01% **
2/13/15	4,680,862	\$39.46	\$0.00	0.43%	0.42%	-0.44%	0.00	0.84	0.68	0.08%	0.36%	0.01	0.41	68.35%
2/17/15	4,018,714	\$39.23	\$0.00	-0.58%	0.18%	-0.19%	0.00	0.84	0.68	0.05%	-0.63%	0.01	-0.72	47.13%
2/18/15	10,148,625	\$37.51	\$0.00	-4.38%	-0.03%	-0.57%	0.00	0.84	0.68	-0.39%	-3.99%	0.01	-4.57	0.00% **

Appendix E
CenturyLink, Inc. Common Stock Data

[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]
Date	Volume	Price	Dividend	Return	Market Return	Excess Industry Return	Coefficient			Predicted Return	Abnormal Return	Root MSE	t-statistic	p-Value
							Intercept	Market	Excess Industry					
2/12/16	10,674,957	\$28.61	\$0.00	4.84%	1.96%	-0.22%	0.00	1.06	1.19	1.65%	3.18%	0.01	2.69	0.82% **
2/16/16	5,918,759	\$28.92	\$0.00	1.08%	1.69%	-0.67%	0.00	1.11	1.14	0.97%	0.12%	0.01	0.10	92.34%
2/17/16	7,100,608	\$29.73	\$0.00	2.80%	1.66%	-0.91%	0.00	1.12	1.14	0.67%	2.13%	0.01	1.75	8.26%
2/18/16	8,243,833	\$30.32	\$0.00	1.98%	-0.46%	1.32%	0.00	1.14	1.10	0.82%	1.17%	0.01	0.95	34.41%
2/19/16	6,510,894	\$29.73	\$0.00	-1.95%	0.01%	-0.68%	0.00	1.14	1.14	-0.87%	-1.08%	0.01	-0.87	38.56%
2/22/16	5,476,039	\$29.99	\$0.00	0.87%	1.45%	-0.28%	0.00	1.17	1.18	1.25%	-0.37%	0.01	-0.31	76.08%
2/23/16	6,814,060	\$29.25	\$0.00	-2.47%	-1.24%	0.41%	0.00	1.17	1.19	-1.09%	-1.38%	0.01	-1.13	25.88%
2/24/16	7,120,802	\$30.01	\$0.00	2.60%	0.45%	0.48%	0.00	1.18	1.18	0.96%	1.64%	0.01	1.35	18.11%
2/25/16	4,701,352	\$30.41	\$0.00	1.33%	1.16%	-0.16%	0.00	1.19	1.20	1.05%	0.29%	0.01	0.23	81.69%
2/26/16	4,829,897	\$30.17	\$0.00	-0.79%	-0.18%	-0.17%	0.00	1.16	1.19	-0.55%	-0.24%	0.01	-0.19	84.71%
2/29/16	6,387,755	\$30.59	\$0.00	1.39%	-0.80%	0.05%	0.00	1.16	1.19	-1.02%	2.42%	0.01	1.99	4.94% *
3/1/16	6,917,669	\$31.12	\$0.00	1.73%	2.39%	-0.28%	0.00	1.16	1.19	2.29%	-0.56%	0.01	-0.45	65.34%
3/2/16	6,450,364	\$31.15	\$0.54	1.83%	0.43%	0.81%	0.00	1.15	1.20	1.33%	0.51%	0.01	0.41	68.36%
3/3/16	5,372,360	\$31.37	\$0.00	0.71%	0.36%	0.01%	0.00	1.17	1.22	0.28%	0.42%	0.01	0.35	73.04%
3/4/16	6,292,744	\$31.59	\$0.00	0.70%	0.33%	-0.41%	0.00	1.17	1.21	-0.25%	0.95%	0.01	0.78	43.80%
3/7/16	5,096,593	\$31.77	\$0.00	0.57%	0.10%	0.63%	0.00	1.18	1.19	0.75%	-0.18%	0.01	-0.15	88.36%
3/8/16	5,550,512	\$31.51	\$0.00	-0.82%	-1.11%	0.81%	0.00	1.18	1.18	-0.46%	-0.36%	0.01	-0.30	76.45%
3/9/16	4,207,328	\$31.53	\$0.00	0.06%	0.52%	-0.64%	0.00	1.19	1.18	-0.25%	0.31%	0.01	0.26	79.79%
3/10/16	6,562,117	\$31.71	\$0.00	0.57%	0.02%	0.42%	0.00	1.20	1.15	0.42%	0.15%	0.01	0.12	90.09%
3/11/16	4,128,254	\$31.87	\$0.00	0.50%	1.67%	-0.76%	0.00	1.20	1.18	1.00%	-0.50%	0.01	-0.41	67.99%
3/14/16	3,527,400	\$31.95	\$0.00	0.25%	-0.12%	0.02%	0.00	1.20	1.19	-0.23%	0.48%	0.01	0.40	68.97%
3/15/16	5,593,898	\$31.32	\$0.00	-1.97%	-0.18%	0.38%	0.00	1.20	1.19	0.12%	-2.09%	0.01	-1.75	8.36%
3/16/16	5,314,404	\$32.17	\$0.00	2.71%	0.57%	0.53%	0.00	1.20	1.18	1.18%	1.54%	0.01	1.27	20.78%
3/17/16	7,928,385	\$31.30	\$0.00	-2.70%	0.66%	0.39%	0.00	1.20	1.19	1.14%	-3.85%	0.01	-3.15	0.21% **
3/18/16	7,913,671	\$31.70	\$0.00	1.28%	0.44%	-1.30%	0.00	1.18	1.17	-1.15%	2.42%	0.01	1.90	5.95%
3/21/16	3,569,607	\$31.70	\$0.00	0.00%	0.10%	0.53%	0.00	1.19	1.09	0.57%	-0.57%	0.01	-0.44	65.77%
3/22/16	4,077,925	\$31.62	\$0.00	-0.25%	-0.07%	-0.49%	0.00	1.18	1.08	-0.75%	0.49%	0.01	0.38	70.32%
3/23/16	5,105,004	\$31.02	\$0.00	-1.90%	-0.64%	0.00%	0.00	1.18	1.08	-0.88%	-1.02%	0.01	-0.79	43.07%
3/24/16	5,416,762	\$31.16	\$0.00	0.45%	-0.04%	1.06%	0.00	1.19	1.08	0.98%	-0.52%	0.01	-0.40	68.65%
3/28/16	3,158,558	\$31.08	\$0.00	-0.26%	0.06%	0.10%	0.00	1.19	1.05	0.06%	-0.31%	0.01	-0.24	80.88%
3/29/16	3,393,052	\$31.59	\$0.00	1.64%	0.90%	0.58%	0.00	1.19	1.04	1.56%	0.08%	0.01	0.06	95.26%
3/30/16	3,660,972	\$31.87	\$0.00	0.89%	0.45%	-0.32%	0.00	1.19	1.02	0.08%	0.80%	0.01	0.62	53.50%
3/31/16	6,807,671	\$31.96	\$0.00	0.28%	-0.20%	-0.06%	0.00	1.19	1.02	-0.42%	0.70%	0.01	0.54	58.69%
4/1/16	6,219,552	\$32.18	\$0.00	0.69%	0.63%	-0.61%	0.00	1.19	1.01	0.03%	0.66%	0.01	0.51	61.00%
4/4/16	5,186,826	\$32.23	\$0.00	0.16%	-0.30%	0.90%	0.00	1.19	1.00	0.43%	-0.28%	0.01	-0.22	82.96%
4/5/16	5,271,152	\$32.10	\$0.00	-0.40%	-1.01%	0.05%	0.00	1.18	0.96	-1.24%	0.83%	0.01	0.66	51.32%
4/6/16	3,832,591	\$32.49	\$0.00	1.21%	1.09%	-0.74%	0.00	1.18	0.95	0.50%	0.71%	0.01	0.56	57.72%
4/7/16	5,704,504	\$31.87	\$0.00	-1.91%	-1.19%	-0.61%	0.00	1.18	0.94	-2.05%	0.14%	0.01	0.11	91.14%
4/8/16	3,873,271	\$31.88	\$0.00	0.03%	0.28%	-0.11%	0.00	1.19	0.94	0.14%	-0.11%	0.01	-0.08	93.25%
4/11/16	2,921,012	\$32.08	\$0.00	0.63%	-0.27%	-0.44%	0.00	1.18	0.94	-0.83%	1.46%	0.01	1.16	24.71%
4/12/16	3,529,556	\$32.00	\$0.00	-0.25%	0.97%	0.09%	0.00	1.18	0.93	1.15%	-1.40%	0.01	-1.12	26.69%
4/13/16	3,308,900	\$32.19	\$0.00	0.59%	1.02%	-1.70%	0.00	1.17	0.93	-0.48%	1.08%	0.01	0.85	39.51%
4/14/16	3,383,582	\$32.09	\$0.00	-0.31%	0.03%	0.27%	0.00	1.17	0.88	0.19%	-0.50%	0.01	-0.40	69.20%
4/15/16	2,956,936	\$32.26	\$0.00	0.53%	-0.10%	0.20%	0.00	1.18	0.89	-0.03%	0.56%	0.01	0.44	65.99%
4/18/16	2,990,263	\$32.22	\$0.00	-0.12%	0.66%	0.13%	0.00	1.17	0.89	0.80%	-0.92%	0.01	-0.73	46.67%
4/19/16	3,578,632	\$32.71	\$0.00	1.52%	0.31%	0.53%	0.00	1.17	0.89	0.73%	0.79%	0.01	0.62	53.39%
4/20/16	3,966,598	\$32.80	\$0.00	0.28%	0.08%	-0.59%	0.00	1.18	0.89	-0.53%	0.80%	0.01	0.64	52.53%
4/21/16	4,347,968	\$31.39	\$0.00	-4.30%	-0.52%	-2.27%	0.00	1.17	0.85	-2.62%	-1.68%	0.01	-1.33	18.52%
4/22/16	4,160,155	\$31.39	\$0.00	0.00%	0.01%	0.81%	0.00	1.18	0.93	0.65%	-0.65%	0.01	-0.52	60.66%
4/25/16	3,717,891	\$31.18	\$0.00	-0.67%	-0.18%	0.45%	0.00	1.18	0.92	0.10%	-0.77%	0.01	-0.60	54.72%
4/26/16	3,160,336	\$31.42	\$0.00	0.77%	0.19%	-0.47%	0.00	1.18	0.91	-0.33%	1.10%	0.01	0.86	38.99%
4/27/16	4,423,518	\$31.58	\$0.00	0.51%	0.17%	1.81%	0.00	1.18	0.90	1.72%	-1.22%	0.01	-0.95	34.19%
4/28/16	3,360,991	\$31.36	\$0.00	-0.70%	-0.92%	-0.07%	0.00	1.18	0.87	-1.25%	0.56%	0.01	0.44	66.30%
4/29/16	5,360,069	\$30.95	\$0.00	-1.31%	-0.51%	0.40%	0.00	1.17	0.86	-0.35%	-0.96%	0.01	-0.75	45.53%
5/2/16	7,744,284	\$31.48	\$0.00	1.71%	0.78%	0.19%	0.00	1.17	0.86	0.98%	0.74%	0.01	0.58	56.35%
5/3/16	7,598,217	\$30.58	\$0.00	-2.86%	-0.87%	-0.29%	0.00	1.18	0.86	-1.38%	-1.48%	0.01	-1.16	24.67%
5/4/16	6,656,754	\$30.96	\$0.00	1.24%	-0.57%	0.50%	0.00	1.21	0.89	-0.38%	1.63%	0.01	1.29	20.03%
5/5/16	20,521,476	\$28.20	\$0.00	-8.91%	0.00%	-0.26%	0.00	1.20	0.90	-0.36%	-8.55%	0.01	-6.73	0.00% **
5/6/16	9,444,983	\$28.54	\$0.00	1.21%	0.33%	0.40%	0.00	1.20	0.90	0.63%	0.57%	0.01	0.45	65.53%
5/9/16	6,057,075	\$28.21	\$0.00	-1.16%	0.08%	-0.26%	0.00	1.20	0.90	-0.26%	-0.90%	0.01	-0.70	48.31%
5/10/16	5,924,534	\$28.73	\$0.00	1.84%	1.25%	0.30%	0.00	1.21	0.92	1.66%	0.18%	0.01	0.14	88.61%
5/11/16	3,903,644	\$28.31	\$0.00	-1.46%	-0.90%	0.11%	0.00	1.21	0.92	-1.14%	-0.33%	0.01	-0.26	79.85%

Appendix E
CenturyLink, Inc. Common Stock Data

[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]
Date	Volume	Price	Dividend	Return	Market Return	Excess Industry Return	Coefficient			Predicted Return	Abnormal Return	Root MSE	t-statistic	p-Value
							Intercept	Market	Excess Industry					
8/10/16	4,076,030	\$30.34	\$0.00	0.63%	-0.25%	0.42%	0.00	1.23	0.61	-0.10%	0.73%	0.01	0.72	47.53%
8/11/16	3,928,280	\$30.42	\$0.00	0.26%	0.49%	-0.07%	0.00	1.22	0.59	0.52%	-0.26%	0.01	-0.25	80.00%
8/12/16	3,197,912	\$29.96	\$0.00	-1.51%	-0.07%	-0.28%	0.00	1.23	0.59	-0.28%	-1.23%	0.01	-1.21	22.69%
8/15/16	2,279,672	\$30.02	\$0.00	0.20%	0.29%	-0.53%	0.00	1.21	0.60	0.01%	0.19%	0.01	0.19	85.18%
8/16/16	3,181,116	\$29.42	\$0.00	-2.00%	-0.53%	-1.68%	0.00	1.20	0.58	-1.64%	-0.35%	0.01	-0.35	72.35%
8/17/16	3,933,090	\$29.25	\$0.00	-0.58%	0.21%	0.03%	0.00	1.20	0.59	0.23%	-0.81%	0.01	-0.81	42.02%
8/18/16	4,395,198	\$29.13	\$0.00	-0.41%	0.22%	-0.93%	0.00	1.20	0.59	-0.32%	-0.09%	0.01	-0.09	93.03%
8/19/16	4,681,371	\$28.84	\$0.00	-1.00%	-0.13%	-0.75%	0.00	1.23	0.60	-0.68%	-0.32%	0.01	-0.32	74.74%
8/22/16	4,620,062	\$28.93	\$0.00	0.31%	-0.05%	0.01%	0.00	1.27	0.60	-0.13%	0.44%	0.01	0.46	64.86%
8/23/16	2,737,608	\$29.10	\$0.00	0.59%	0.20%	-0.09%	0.00	1.26	0.59	0.13%	0.46%	0.01	0.48	63.53%
8/24/16	3,230,286	\$29.05	\$0.00	-0.17%	-0.52%	0.33%	0.00	1.26	0.59	-0.53%	0.36%	0.01	0.37	70.99%
8/25/16	3,530,221	\$29.15	\$0.00	0.34%	-0.13%	0.53%	0.00	1.26	0.59	0.07%	0.27%	0.01	0.28	78.08%
8/26/16	4,247,567	\$28.76	\$0.00	-1.34%	-0.16%	-0.95%	0.00	1.26	0.60	-0.83%	-0.50%	0.01	-0.52	60.40%
8/29/16	4,011,342	\$28.75	\$0.00	-0.03%	0.54%	0.46%	0.00	1.27	0.60	0.88%	-0.91%	0.01	-0.94	34.89%
8/30/16	4,944,977	\$28.57	\$0.00	-0.63%	-0.18%	-0.18%	0.00	1.26	0.59	-0.42%	-0.21%	0.01	-0.21	83.07%
8/31/16	4,472,605	\$27.80	\$0.54	-0.81%	-0.22%	0.16%	0.00	1.26	0.59	-0.27%	-0.53%	0.01	-0.55	58.36%
9/1/16	4,470,163	\$27.74	\$0.00	-0.22%	0.00%	0.28%	0.00	1.29	0.58	0.07%	-0.29%	0.01	-0.30	76.64%
9/2/16	3,048,215	\$27.94	\$0.00	0.72%	0.43%	0.03%	0.00	1.29	0.58	0.47%	0.25%	0.01	0.26	79.70%
9/6/16	2,992,260	\$28.17	\$0.00	0.82%	0.30%	0.69%	0.00	1.29	0.59	0.72%	0.10%	0.01	0.11	91.30%
9/7/16	3,210,762	\$28.40	\$0.00	0.82%	0.01%	0.25%	0.00	1.27	0.57	0.07%	0.75%	0.01	0.80	42.79%
9/8/16	3,404,237	\$28.35	\$0.00	-0.18%	-0.22%	-0.02%	0.00	1.31	0.61	-0.35%	0.18%	0.01	0.20	83.95%
9/9/16	7,008,383	\$27.86	\$0.00	-1.73%	-2.45%	-1.80%	0.00	1.31	0.65	-4.44%	2.71%	0.01	3.14	0.22% **
9/12/16	4,771,966	\$28.04	\$0.00	0.65%	1.47%	1.07%	0.00	1.19	0.55	2.31%	-1.67%	0.01	-1.87	6.40%
9/13/16	4,497,058	\$27.44	\$0.00	-2.14%	-1.45%	-0.97%	0.00	1.15	0.52	-2.23%	0.09%	0.01	0.10	92.44%
9/14/16	2,958,109	\$27.43	\$0.00	-0.04%	-0.05%	-0.06%	0.00	1.14	0.52	-0.13%	0.09%	0.01	0.10	92.03%
9/15/16	7,598,614	\$26.98	\$0.00	-1.64%	1.03%	0.50%	0.00	1.14	0.52	1.39%	-3.03%	0.01	-3.38	0.10% **
9/16/16	7,114,403	\$26.89	\$0.00	-0.33%	-0.38%	-0.15%	0.00	1.09	0.49	-0.54%	0.20%	0.01	0.22	82.89%
9/19/16	4,457,047	\$27.04	\$0.00	0.56%	0.00%	-0.69%	0.00	1.08	0.49	-0.39%	0.95%	0.01	1.01	31.31%
9/20/16	3,345,411	\$26.75	\$0.00	-1.07%	0.03%	-0.19%	0.00	1.08	0.48	-0.11%	-0.96%	0.01	-1.02	30.88%
9/21/16	4,296,810	\$26.92	\$0.00	0.64%	1.09%	0.57%	0.00	1.08	0.48	1.39%	-0.76%	0.01	-0.80	42.37%
9/22/16	5,094,979	\$27.61	\$0.00	2.56%	0.65%	0.68%	0.00	1.07	0.48	0.95%	1.62%	0.01	1.71	9.03%
9/23/16	3,853,878	\$27.42	\$0.00	-0.69%	-0.57%	0.79%	0.00	1.08	0.50	-0.29%	-0.40%	0.01	-0.42	67.77%
9/26/16	2,357,661	\$27.31	\$0.00	-0.40%	-0.85%	0.04%	0.00	1.10	0.49	-0.99%	0.59%	0.01	0.61	54.13%
9/27/16	2,844,859	\$27.35	\$0.00	0.15%	0.65%	0.27%	0.00	1.08	0.50	0.76%	-0.62%	0.01	-0.65	52.01%
9/28/16	2,598,215	\$27.55	\$0.00	0.73%	0.55%	-1.41%	0.00	1.07	0.49	-0.18%	0.91%	0.01	0.95	34.47%
9/29/16	2,610,971	\$27.52	\$0.00	-0.11%	-0.93%	0.43%	0.00	1.08	0.47	-0.86%	0.75%	0.01	0.78	43.41%
9/30/16	3,363,364	\$27.43	\$0.00	-0.33%	0.80%	-0.83%	0.00	1.07	0.48	0.38%	-0.71%	0.01	-0.74	45.88%
10/3/16	3,048,400	\$27.52	\$0.00	0.33%	-0.31%	0.32%	0.00	1.08	0.50	-0.25%	0.57%	0.01	0.60	54.75%
10/4/16	4,342,517	\$27.08	\$0.00	-1.60%	-0.49%	-1.31%	0.00	1.08	0.51	-1.25%	-0.35%	0.01	-0.36	71.73%
10/5/16	4,826,467	\$27.03	\$0.00	-0.18%	0.47%	-1.01%	0.00	1.08	0.52	-0.08%	-0.10%	0.01	-0.11	91.28%
10/6/16	3,531,399	\$26.97	\$0.00	-0.22%	0.05%	-0.10%	0.00	1.08	0.52	-0.07%	-0.15%	0.01	-0.16	87.19%
10/7/16	13,519,671	\$27.76	\$0.00	2.93%	-0.32%	-0.32%	0.00	1.09	0.52	-0.58%	3.51%	0.01	3.70	0.03% **
10/10/16	3,118,235	\$27.84	\$0.00	0.29%	0.46%	0.15%	0.00	1.06	0.49	0.52%	-0.23%	0.01	-0.23	81.60%
10/11/16	5,412,856	\$27.64	\$0.00	-0.72%	-1.24%	0.66%	0.00	1.06	0.50	-1.04%	0.32%	0.01	0.32	74.67%
10/12/16	2,580,380	\$27.57	\$0.00	-0.25%	0.12%	0.54%	0.00	1.03	0.40	0.32%	-0.57%	0.01	-0.59	55.39%
10/13/16	2,750,712	\$27.39	\$0.00	-0.65%	-0.31%	0.24%	0.00	1.02	0.40	-0.24%	-0.41%	0.01	-0.43	66.94%
10/14/16	2,003,263	\$27.34	\$0.00	-0.18%	0.02%	-0.15%	0.00	1.03	0.40	-0.06%	-0.12%	0.01	-0.13	90.01%
10/17/16	3,118,122	\$27.37	\$0.00	0.11%	-0.30%	0.40%	0.00	1.02	0.41	-0.17%	0.28%	0.01	0.29	77.06%
10/18/16	3,770,437	\$27.90	\$0.00	1.94%	0.62%	-0.30%	0.00	1.02	0.42	0.48%	1.46%	0.01	1.51	13.28%
10/19/16	3,274,349	\$28.18	\$0.00	1.00%	0.23%	0.02%	0.00	1.04	0.42	0.24%	0.76%	0.01	0.79	43.33%
10/20/16	4,336,602	\$27.97	\$0.00	-0.75%	-0.13%	-1.94%	0.00	1.04	0.42	-0.95%	0.21%	0.01	0.21	83.13%
10/21/16	4,790,620	\$28.21	\$0.00	0.86%	-0.01%	-2.36%	0.00	1.03	0.41	-0.98%	1.84%	0.01	1.90	5.96%
10/24/16	3,193,735	\$28.32	\$0.00	0.39%	0.48%	-1.11%	0.00	0.99	0.33	0.13%	0.26%	0.01	0.27	78.59%
10/25/16	3,390,382	\$28.45	\$0.00	0.46%	-0.38%	-0.34%	0.00	1.01	0.32	-0.47%	0.93%	0.01	0.98	33.03%
10/26/16	3,289,316	\$28.25	\$0.00	-0.70%	-0.17%	-0.45%	0.00	1.00	0.31	-0.29%	-0.41%	0.01	-0.43	66.71%
10/27/16	36,625,594	\$31.00	\$0.00	9.73%	-0.30%	1.55%	0.00	1.00	0.31	0.20%	9.54%	0.01	10.03	0.00% **
10/28/16	15,382,989	\$30.39	\$0.00	-1.97%	-0.31%	-0.01%	0.00	0.97	0.53	-0.19%	-1.78%	0.01	-1.39	16.77%
10/31/16	71,943,608	\$26.58	\$0.00	-12.54%	-0.01%	0.45%	0.00	0.97	0.53	0.32%	-12.86%	0.01	-9.96	0.00% **
11/1/16	36,114,903	\$24.97	\$0.00	-6.06%	-0.68%	-0.41%	0.00	0.96	0.53	-0.77%	-5.29%	0.01	-4.09	0.01% **
11/2/16	21,126,829	\$24.18	\$0.00	-3.16%	-0.64%	-0.75%	0.00	1.02	0.56	-1.02%	-2.14%	0.01	-1.55	12.39%
11/3/16	30,038,531	\$23.00	\$0.00	-4.88%	-0.41%	0.47%	0.00	1.03	0.58	-0.10%	-4.78%	0.01	-3.43	0.09% **
11/4/16	21,633,402	\$23.05	\$0.00	0.22%	-0.16%	0.18%	0.00	1.08	0.54	-0.07%	0.28%	0.01	0.20	84.57%

Appendix E
CenturyLink, Inc. Common Stock Data

[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]
Date	Volume	Price	Dividend	Return	Market Return	Excess Industry Return	Coefficient			Predicted Return	Abnormal Return	Root MSE	t-statistic	p-Value
							Intercept	Market	Excess Industry					
2/7/17	6,022,232	\$24.88	\$0.00	-0.68%	0.03%	0.05%	0.00	0.92	0.58	0.05%	-0.73%	0.02	-0.47	64.13%
2/8/17	13,671,506	\$24.43	\$0.00	-1.81%	0.10%	0.31%	0.00	0.91	0.57	0.26%	-2.07%	0.02	-1.33	18.60%
2/9/17	10,179,851	\$24.42	\$0.00	-0.04%	0.59%	0.15%	0.00	0.91	0.56	0.61%	-0.65%	0.02	-0.41	67.94%
2/10/17	5,882,601	\$24.49	\$0.00	0.29%	0.36%	0.05%	0.00	0.91	0.56	0.34%	-0.06%	0.02	-0.04	97.15%
2/13/17	6,555,986	\$24.62	\$0.00	0.53%	0.55%	-1.64%	0.00	0.91	0.56	-0.43%	0.96%	0.02	0.61	54.39%
2/14/17	4,962,947	\$24.54	\$0.00	-0.32%	0.43%	-0.38%	0.00	0.93	0.54	0.18%	-0.51%	0.02	-0.32	74.80%
2/15/17	5,599,574	\$24.40	\$0.00	-0.57%	0.51%	-0.06%	0.00	0.92	0.54	0.42%	-0.99%	0.02	-0.63	52.96%
2/16/17	5,162,872	\$24.28	\$0.00	-0.49%	-0.08%	0.56%	0.00	0.91	0.54	0.21%	-0.70%	0.02	-0.44	65.85%
2/17/17	5,122,976	\$24.28	\$0.00	0.00%	0.17%	0.81%	0.00	0.92	0.54	0.56%	-0.56%	0.02	-0.35	72.46%
2/21/17	6,846,831	\$24.67	\$0.00	1.61%	0.60%	0.20%	0.00	0.91	0.53	0.62%	0.98%	0.02	0.62	53.52%
2/22/17	6,431,600	\$24.83	\$0.00	0.65%	-0.10%	0.13%	0.00	0.93	0.53	-0.04%	0.69%	0.02	0.44	66.27%
2/23/17	6,597,988	\$24.71	\$0.00	-0.48%	0.05%	0.92%	0.00	0.93	0.53	0.53%	-1.01%	0.02	-0.64	52.46%
2/24/17	6,056,642	\$24.58	\$0.00	-0.53%	0.17%	0.55%	0.00	0.92	0.52	0.43%	-0.96%	0.02	-0.61	54.57%
2/27/17	6,722,186	\$24.61	\$0.00	0.12%	0.12%	-1.29%	0.00	0.92	0.52	-0.58%	0.70%	0.02	0.44	65.89%
2/28/17	13,031,838	\$24.26	\$0.00	-1.42%	-0.25%	-0.30%	0.00	0.92	0.51	-0.40%	-1.02%	0.02	-0.64	52.22%
3/1/17	14,735,804	\$24.04	\$0.54	1.32%	1.39%	-0.41%	0.00	0.93	0.51	1.05%	0.27%	0.02	0.17	86.57%
3/2/17	10,003,104	\$23.53	\$0.00	-2.12%	-0.58%	0.47%	0.00	0.94	0.51	-0.33%	-1.79%	0.02	-1.12	26.30%
3/3/17	8,419,064	\$23.48	\$0.00	-0.21%	0.05%	-0.03%	0.00	0.97	0.49	-0.01%	-0.20%	0.02	-0.13	89.96%
3/6/17	8,175,124	\$23.10	\$0.00	-1.62%	-0.33%	0.04%	0.00	1.08	0.53	-0.41%	-1.21%	0.02	-0.76	44.75%
3/7/17	11,620,855	\$22.50	\$0.00	-2.60%	-0.28%	-0.47%	0.00	1.16	0.55	-0.67%	-1.93%	0.02	-1.22	22.64%
3/8/17	7,310,167	\$22.45	\$0.00	-0.22%	-0.20%	-0.27%	0.00	1.19	0.56	-0.49%	0.27%	0.02	0.17	86.75%
3/9/17	7,984,260	\$22.73	\$0.00	1.25%	0.08%	0.36%	0.00	1.19	0.56	0.20%	1.05%	0.02	0.66	51.32%
3/10/17	6,382,025	\$23.14	\$0.00	1.80%	0.33%	0.44%	0.00	1.29	0.59	0.61%	1.20%	0.02	0.76	44.84%
3/13/17	8,358,911	\$23.46	\$0.00	1.38%	0.07%	0.13%	0.00	1.30	0.59	0.10%	1.28%	0.02	0.81	41.90%
3/14/17	5,893,068	\$23.34	\$0.00	-0.51%	-0.33%	-0.25%	0.00	1.31	0.60	-0.65%	0.14%	0.02	0.09	93.15%
3/15/17	10,642,838	\$23.77	\$0.00	1.84%	0.84%	0.80%	0.00	1.30	0.60	1.52%	0.32%	0.02	0.20	83.93%
3/16/17	10,728,969	\$23.37	\$0.00	-1.68%	-0.16%	-0.14%	0.00	1.35	0.61	-0.34%	-1.34%	0.02	-0.85	39.62%
3/17/17	24,891,583	\$23.65	\$0.00	1.20%	-0.13%	0.64%	0.00	1.33	0.60	0.14%	1.05%	0.02	0.67	50.41%
3/20/17	8,138,955	\$23.64	\$0.00	-0.04%	-0.20%	-0.22%	0.00	1.32	0.62	-0.45%	0.41%	0.02	0.26	79.59%
3/21/17	7,234,732	\$23.36	\$0.00	-1.18%	-1.23%	0.29%	0.00	1.34	0.62	-1.53%	0.34%	0.02	0.22	82.70%
3/22/17	12,577,325	\$22.81	\$0.00	-2.35%	0.19%	-1.16%	0.00	1.34	0.62	-0.51%	-1.84%	0.02	-1.17	24.31%
3/23/17	6,887,351	\$22.64	\$0.00	-0.75%	-0.10%	-0.02%	0.00	1.32	0.66	-0.22%	-0.53%	0.02	-0.33	73.91%
3/24/17	5,890,158	\$22.76	\$0.00	0.53%	-0.08%	0.19%	0.00	1.36	0.65	-0.08%	0.61%	0.02	0.38	70.16%
3/27/17	9,057,861	\$22.61	\$0.00	-0.66%	-0.10%	-0.66%	0.00	1.37	0.65	-0.64%	-0.02%	0.02	-0.01	99.16%
3/28/17	7,325,754	\$22.52	\$0.00	-0.40%	0.73%	-0.25%	0.00	1.38	0.65	0.76%	-1.16%	0.02	-0.73	46.46%
3/29/17	8,208,235	\$23.09	\$0.00	2.53%	0.13%	-0.28%	0.00	1.35	0.65	-0.09%	2.62%	0.02	1.66	9.93%
3/30/17	7,466,212	\$23.41	\$0.00	1.39%	0.30%	0.23%	0.00	1.36	0.64	0.48%	0.90%	0.02	0.57	57.25%
3/31/17	7,533,614	\$23.57	\$0.00	0.68%	-0.23%	-0.36%	0.00	1.37	0.64	-0.59%	1.28%	0.02	0.80	42.62%
4/3/17	6,992,549	\$23.60	\$0.00	0.13%	-0.16%	0.48%	0.00	1.41	0.65	0.01%	0.12%	0.02	0.08	93.96%
4/4/17	12,820,344	\$23.96	\$0.00	1.53%	0.07%	0.37%	0.00	1.41	0.65	0.26%	1.26%	0.02	0.80	42.28%
4/5/17	12,561,386	\$24.21	\$0.00	1.04%	-0.30%	-0.24%	0.00	1.44	0.65	-0.66%	1.70%	0.02	1.09	28.00%
4/6/17	7,640,759	\$24.46	\$0.00	1.03%	0.22%	-0.65%	0.00	1.42	0.65	-0.16%	1.20%	0.02	0.76	44.98%
4/7/17	9,662,269	\$24.54	\$0.00	0.33%	-0.08%	0.26%	0.00	1.42	0.65	0.01%	0.32%	0.02	0.20	84.07%
4/10/17	8,136,814	\$24.87	\$0.00	1.34%	0.07%	-0.36%	0.00	1.42	0.65	-0.16%	1.51%	0.02	0.95	34.25%
4/11/17	8,899,935	\$24.90	\$0.00	0.12%	-0.13%	0.16%	0.00	1.42	0.64	-0.11%	0.23%	0.02	0.14	88.51%
4/12/17	10,806,222	\$25.14	\$0.00	0.96%	-0.37%	0.81%	0.00	1.39	0.64	-0.03%	1.00%	0.02	0.63	53.05%
4/13/17	9,958,699	\$25.12	\$0.00	-0.08%	-0.68%	-0.20%	0.00	1.37	0.65	-1.09%	1.01%	0.02	0.64	52.30%
4/17/17	7,318,113	\$25.30	\$0.00	0.72%	0.86%	-0.32%	0.00	1.35	0.67	0.93%	-0.21%	0.02	-0.13	89.43%
4/18/17	7,294,946	\$25.06	\$0.00	-0.95%	-0.29%	0.47%	0.00	1.36	0.75	-0.09%	-0.86%	0.02	-0.55	58.47%
4/19/17	11,207,568	\$25.29	\$0.00	0.92%	-0.16%	-0.10%	0.00	1.37	0.75	-0.35%	1.27%	0.02	0.81	41.86%
4/20/17	8,716,160	\$25.49	\$0.00	0.79%	0.76%	-0.77%	0.00	1.38	0.76	0.40%	0.39%	0.02	0.25	80.18%
4/21/17	7,432,209	\$25.32	\$0.00	-0.67%	-0.30%	-1.35%	0.00	1.39	0.75	-1.50%	0.83%	0.02	0.53	59.69%
4/24/17	7,725,596	\$25.45	\$0.00	0.51%	1.09%	-0.77%	0.00	1.48	0.55	1.05%	-0.53%	0.01	-0.41	68.45%
4/25/17	11,383,337	\$25.93	\$0.00	1.89%	0.61%	-0.72%	0.00	1.44	0.55	0.35%	1.53%	0.01	1.17	24.27%
4/26/17	8,972,261	\$25.87	\$0.00	-0.23%	-0.05%	1.29%	0.00	1.47	0.54	0.51%	-0.74%	0.01	-0.57	57.26%
4/27/17	12,119,332	\$25.79	\$0.00	-0.31%	0.07%	-1.34%	0.00	1.33	0.49	-0.64%	0.33%	0.01	0.27	79.04%
4/28/17	11,581,185	\$25.67	\$0.00	-0.47%	-0.19%	-0.92%	0.00	1.28	0.46	-0.71%	0.25%	0.01	0.20	83.82%
5/1/17	9,827,091	\$25.38	\$0.00	-1.13%	0.17%	-0.88%	0.00	1.19	0.48	-0.21%	-0.92%	0.01	-0.80	42.35%
5/2/17	9,168,370	\$25.95	\$0.00	2.25%	0.12%	-0.16%	0.00	1.19	0.49	0.06%	2.19%	0.01	1.91	5.88%
5/3/17	10,400,439	\$25.42	\$0.00	-2.04%	-0.11%	-0.65%	0.00	1.30	0.49	-0.44%	-1.60%	0.01	-1.39	16.84%
5/4/17	28,643,399	\$23.74	\$0.00	-6.61%	0.06%	-1.05%	0.00	1.27	0.49	-0.45%	-6.16%	0.01	-5.43	0.00% **
5/5/17	12,349,560	\$23.60	\$0.00	-0.59%	0.41%	1.25%	0.00	1.32	0.49	1.14%	-1.73%	0.01	-1.52	13.09%